SOUTHERN PACIFIC COMPANY

SACRAMENTO DIVISION SPECIAL INSTRUCTIONS

No. 2

EFFECTIVE WEDNESDAY, NOVEMBER 15, 1950
AT 12:01 A. M.,
PACIFIC STANDARD TIME
SUPERSEDING SPECIAL INSTRUCTIONS No. 1

THESE INSTRUCTIONS CONSTITUTE A PART OF THE TIMETABLE CURRENTLY IN EFFECT

R. E. HALLAWELL,
General Manager.

E. D. MOODY,
H. R. HUGHES,
Assistant General Managers.

C. H. GRANT,
General Superintendent of Transportation.

M. S. OLSEN,
Superintendent of Transportation.

M. L. JENNINGS,
Superintendent.

RULE A. All, or portions of, the following rules have been changed. Pasters have been printed covering these changes, and employes must have the pasters in their copy of Book of Rules:

Rules
10 (H)
15
26
99
104 (D)
210
221
271
295
297
705
707
708
763
837

Definition of FIXED SIGNAL is changed to read as follows:

"A signal of fixed location indicating a condition affecting the movement of a train, such as train-order, automatic, interlocking or absolute signal; switch, stop boards, yard limit boards or speed boards."

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

RULES 1 (A), 2 (A), 3 (A) and 3 (B) are cancelled, and Rules 1, 2 and 3 are amended as follows:

"**RULE 1.** Standard time, obtained from an authorized observatory, will be transmitted by telegraph daily except Sundays and holidays. Clocks bearing the prescribed sign "Standard Clock" will be maintained at designated places, as shown in timetable, and employes charged with the duty of receiving time signal must set standard clock to agree with time signal and make record on prescribed form of any variation.

"At enginehouses and other locations of standard clocks where time signal is not received, employe in charge of standard clock must obtain correct time from nearest train-order operator by telephone, during, or after, transmittal of time signal, and set the clock."

"**RULE 2.** Each of the following employes, and such other employes as may be designated, must carry, while on duty, a reliable railroad grade watch, and must carry a watch certificate, Form CS-2821, which must be presented to an authorized watch inspector for renewal during the month of November of each year:

*Train-Order Operators
*Signal Operators
*Except when assigned in offices where a standard clock is located.
Conductors
Brakemen
Engineers
Firemen
Outside Hostlers
Outside Hostler Helpers
General Yardmasters
Asst. General Yardmasters
Yardmasters
Asst. Yardmasters
Yard-Engine Foremen
Yardmen
Switch Tenders
Herders

"Employes must show their watches and certificates to division officers, authorized watch inspectors and traveling watch inspectors upon request."

"**RULE 3.** Conductors, yard-engine foremen, engineers and outside hostlers must compare their watches with a standard clock, and conductors and yard-engine foremen must compare time with their engineers, when commencing each day's work; and conductors must compare time with their brakemen, yard-engine foremen with their yardmen, and engineers with their firemen, as soon thereafter as practicable.

"The time when watch is compared with standard clock, and any variation of such watch, if not set to correct time, must be recorded on prescribed form.

"When an additional engine is added to a train en route, engineer of that engine must compare time with the conductor or an engineer of the train.

"When conductors and engineers tie up at a point where there is no standard clock, time must be compared with train-order operator on duty when commencing each day's work. If this cannot be done, time must be compared with conductor or engineer of first available train.

"At train-order offices and interlockings where there is no standard clock, train-order operators and signal operators must, during each tour of duty, compare time with time signal if possible, otherwise with a train-order operator where standard clock is maintained, or time signal is received.

"Watches must be set to correct time if they reflect a variation of more than twenty seconds from correct time when comparison is made as prescribed in this rule."

RULE 7 (B). Yardmen must use green flag by day and green light by night in giving proceed signals for movement of trains at Sacramento, Roseville and Gerber, except that at Roseville proceed signal for movement from Tehama line yellow flag by day and yellow light by night must be used.

RULE 10 (J). Is revised to read as follows:

"Speed boards will be located to the right of track in direction of approach where practicable, except on double track where trains keep to the left, they will be located to the left if proximity of adjoining main track prevents location to the right.

"Speed boards that prescribe reduction in speed will be located three-fourths mile from initial point of restriction. Speed boards that authorize an increase in speed will be located at the point where higher speed is permissible, and speed may be increased accordingly as soon as rear of train has passed the speed board.

(no change in Figs. 1, 2 and 3)

"The higher number on speed board indicates the maximum speed of trains consisting entirely of passenger equipment, and the lower number indicates the maximum speed of all other trains. Where but one number is shown it indicates the maximum speed of all trains.

"Round yellow speed boards indicate by black figures the maximum speed of certain passenger trains designated by special instructions in the timetable or by timetable bulletin; speed indicated by oval white speed boards applies to those trains unless a round yellow speed board is displayed on same post below the oval speed board.

"Certain speed boards have the word 'SIGNAL' above the figures. Such speed boards in approach to a distant signal indicate the speed that must not be exceeded while engine is passing the distant signal three-fourths mile beyond the speed board, unless distant signal can plainly be seen to be displaying proceed indication; and such speed boards in approach to a home signal indicate the speed that must not be exceeded while approaching the home signal three-fourths mile beyond the speed board; until indication of home signal can plainly be seen. The word 'SIGNAL' on an oval speed board also applies to a round yellow speed board if displayed on the same post."

Speed boards prescribing an increase in speed will not be installed on branches. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

RULE 15. Each torpedo placed will be duplicated on opposite rail during snow storms, or when snow on rails.

RULE 17. Oscillating white light on engines so equipped must be operated during stormy weather day and night, foggy weather during daylight hours only and must be operated approaching road crossings at grade both day and night under all conditions.

Oscillating red light on engines so equipped shall be operated by day or night, only when a train has stopped, or is stopping, under circumstances that may cause an adjacent track to be fouled, and will not in any way relieve trainmen and enginemen from compliance with Rules 99 and 102. A train or engine on adjacent track must stop at once, and may proceed only after ascertaining that track is safe for passage of trains.

RULES 17, 17 (B), 17 (C) and S-17. Headlight will be displayed by day on all freight and passenger trains between Sacramento and Brighton, Sacramento and Colfax, Roseville and Gerber, and Davis and Gerber, as an aid to motorists. When so displayed, the provisions of Rules 17, 17 (B), 17 (C) and S-17 will not apply unless other conditions require.

RULE 19. Classification lamps on rear of DEF and DERS class engines will be considered as marker lamps by day or by night only when such lamps are lighted.

RULE 26. When emergency work is to be done under Streamliner CITY OF SAN FRANCISCO, chains must also be placed each side of a traction wheel, and 90-pound brake pipe pressure must be maintained until work completed.

RULE 34. On multiple-unit Diesel engines in freight service, the fireman must not leave the cab while the train is in motion unless authorized by the engineer and unless a member of the train crew is in the cab in a position to communicate with the engineer the indication of signals affecting the movement of train as provided for in Rule 34. If a member of the train crew is not in the cab, and not engaged in other duties, the engineer may signal him to come to the cab by giving two short sounds of the whistle repeated twice (oo oo oo). If a condition arises which necessitates the fireman leaving the cab at a time that a member of the train crew is absent, which cannot await a regular stop of the train, the train must be stopped during the time that the fireman is absent from the cab.

RULE 99 (C). Will apply on Placerville, Walnut Grove, Yuba City, Oroville, Stirling City, Fruto, Colusa and Knights Landing Branches.

RULE D-152. When moving against current of traffic, or when movement is not protected by block signals, maximum speed of passenger trains 50 MPH, freight and mixed trains and engines 40 MPH, but must not exceed speed restrictions applying to normal operation. Unless proceed signal received, or it is known that warning devices are operating, such trains and engines must stop approaching road crossings where automatic warning devices are installed, and may proceed after member of crew protects crossing.

RULE 221. Within block system limits only, third and sixth paragraphs of Rule 221 are modified to the extent that it will no longer be necessary for train to obtain clearance if train-order signal at an open train-order office is first seen and remains in proceed position.

If no orders are held for trains from the same direction, or if orders held are for trains originating only, the operator may clear the signal before train reaches such view-point.

Also, within block system limits only, signal may be cleared for a first-class train for which there are no orders, when orders are held for another train from the same direction, provided such orders do not restrict the train addressed at that station, and further provided that permission is first obtained from train dispatcher. Such permission must not be given if the train to which orders are addressed has passed the last open train-order office.

Last paragraph is changed to read as follows:

"When light is not displayed in a train-order signal at night, day indication of the signal arm will govern, and report must be made from next open office, unless special instructions provide that light will not be displayed."

RULE 281B. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route," Figs. 1 and 2, must be made with caution.

RULES 281 and 281D. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. 5, Rule 281; or by light type dwarf signals displaying "Proceed Prepared to Stop at Next Home Signal," Fig. 7, Rule 281D, must be made with caution, and position of switches observed.

RULE 505. AUTOMATIC BLOCK SYSTEM

PUSH BUTTONS

Where signal protection is provided for movements from an adjacent track to main track, push buttons and pilot lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass Approach Circuit sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Pilot light will appear after time-release has operated and signal has cleared.

Further instructions posted inside push button box.

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until switch indicator indicates block clear on opposite track.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked. Lock-box door must then be closed and locked.

When switch indicators indicate "block occupied", instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Emergency lock release to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, dispatcher must be notified, and movement made only after flag protection is provided.

RULE 535. SPRING SWITCHES

Maximum speed for trailing movement when the spring is to be actuated, and maximum speed for facing movement with switch points in normal position, as indicated in speed restrictions tables must not be exceeded.

A spring switch with facing point lock must not be trailed through unless switch target displays letters "SS" in normal position, or switch has been lined for the movement.

When a spring switch or spring derail is hand thrown, trainman so setting same must again set it for normal position after movement has been completed, unless he has arranged for another trainman to do so.

Trains and engines moving against the current of traffic must not exceed 25 MPH over a spring switch in facing point direction. Unless the movement is protected by a block signal displaying proceed indication, or by a switch-point indicator displaying green aspect, stop must be made before reaching the spring switch and member of crew must examine same and know that points are in proper position for movement and switch locked, before proceeding.

RULE 536. Wheels of tenders must not be considered as engine wheels.

GENERAL REGULATIONS

RULE 824. On grades at any point, where engine or engines are to be detached for any reason, air brakes must be released and a sufficient number of hand brakes must be set to hold train.

RULE 825. Fifth and sixth paragraphs are revised to read as follows:

"When empty cars are stored on tracks adjacent to buildings an opening of at least forty feet must be made every five car-lengths.

"Outfit cars must not be left adjacent to oil or gasoline loading or unloading locations, lumber yards, storehouses, warehouses or other buildings. When placed on tracks without fire protection, an opening of at least forty feet must be made every five car-lengths. Diner should not be separated from kitchen car."

RULE 826. When a sign reading "Occupied Outfit Cars" is attached to switch lock, the outfit cars must not be coupled to, nor moved, until occupants have been notified, and permission given by foreman or his representative.

RULE 827. Unless otherwise provided, when conditions are favorable and in the judgment of conductor it is safe, freight trains need not stop for train inspection. Where stops are made for other reasons, inspection of trains must be made as often as practicable. When weather conditions restrict visibility, or other conditions require, conductor will designate stops for inspection which in his judgment are necessary.

Trains, including military trains, made up in part of freight cars or caboose equipped with cast iron wheels, are required to comply with rules and timetable instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

When train handling logs (except in gondolas) takes siding to meet an opposing train or allow a following train to pass, such train must be thoroughly inspected to see that proper clearance exists to insure safe movement for the expected train, and no movement of train on siding attempted until expected train has passed.

Cars bearing placards denoting contents are explosive, inflammable, poisonous, or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

RULE 828 is revised to read as follows:

"Speed of freight trains must not exceed eight miles per hour for a distance sufficient to permit running inspection when starting. Trainmen must closely watch to see that brakes are released, and if necessary must signal enginemen to stop if wheels are found sliding. Conductor must promptly mail to the Superintendent a report of flat wheels discovered under cars in his train.

RULE 831 is revised to read as follows:

"Occupied wooden frame outfit cars must be placed next ahead of passenger cars if handled in mixed trains, or next ahead of caboose if handled in freight trains.

"Women and children must not be permitted to ride in outfit cars when moved in freight train. Other occupants of outfit cars must remain inside and not ride on top, sides or between these and other cars during course of road or yard movements."

RULE 832. Wooden underframe cars of any class must be placed next ahead of caboose, except that when handled in the same train with wooden frame outfit cars they must be placed next ahead of the outfit cars.

RULE 834. Does not apply to trains consisting entirely of logs.

RULE 849. When temperature drops below freezing point (32 degrees) train-heat valve on rear car must be opened frequently and train-heat line blown out to avoid condensation in train-heat line.

Train-heat valves on Nos. 27 and 28 will not be opened at Sacramento, nor on eastward and westward passenger trains at Gerber unless it is known in advance that engine is to be changed or train is to be switched, in which case second paragraph of Rule 849 will be complied with. In the event it is necessary to detach engine or cars after arrival, precautions must be taken to see that no injury results from escaping steam in uncoupling steam connections.

RULE 869 is cancelled.

RULE 873. Sanders must not be operated within 150 feet of power operated switches.

Blow-off cocks must not be opened when passing over open-deck bridges and trestles.

AIR BRAKE RULES

RULE 3. Streamliners CITY OF SAN FRANCISCO, SHASTA DAYLIGHT and CASCADE carry 110-lb. brake pipe pressure and have graduated release; when necessary to use a steam engine to handle train, such engine must also carry 110-lb. brake pipe pressure instead of the 90-lb. ordinarily carried when handling passenger trains. The high pressure side of the air compressor governor of the steam engine must be set for 140-lb. and the low pressure side for 130-lb.

FREIGHT TRAINS

RULE 25. When passenger equipment is handled on freight trains and a rear end test is made, considerable time must elapse before brake pipe pressure will build up sufficiently to release the brakes on passenger equipment.

Conductor will advise engineman when they have such passenger equipment on the rear of train so he may allow a sufficient length of time for brakes to release before attempting to start train.

PASSENGER TRAINS

RULE 38. Incoming engineer at Sacramento and Sparks on Streamliner CITY OF SAN FRANCISCO will make electro-pneumatic brake application of not less than 60 pounds and leave brakes applied. Inspector will note that rear brakes of train apply, then signal for release. Outgoing engineer will release brakes and inspector will note that rear brakes release. In case electro-pneumatic brakes are inoperative, automatic brake valve will be used.

Before any helper engine is coupled to train, make automatic brake pipe reduction of not less than 20 pounds, close combination cut-out cock, then place both brake-valve handles in release position. Helper engineer will then make release in usual manner.

When steam engine is to be cut off train, the automatic brake should be applied and left applied until engine is detached. Engineman should then open the double heading cock and apply electro-pneumatic brake.

MISCELLANEOUS

4. Helper service:

No Helper engine will be placed behind wooden underframe cars or cabooses.

Engines weighing more than 320,000 pounds on drivers will not be placed behind steel underframe cabooses.

In no case will more than one helper engine be placed behind steel underframe cabooses.

One helper may be placed on head-end, except that not more than one AC class engine, nor more than two engines of other classes may be placed on head-end of any freight train. When additional helpers are required, they will be placed when practicable in rear of train four cars ahead of caboose and any cars of wooden frame construction, except that C class helpers may be placed ahead of caboose and cars of wooden frame construction and when practicable should be placed behind a loaded car.

DEF class engines, when used as helpers, will be placed eighteen cars ahead of caboose.

Helper or doubleheader engines must not be placed on head-end of freight trains powered by DEF class engines.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

When used as helpers in rear of train, AC or MM class engines must not be coupled together, nor may more than two F, Mt, or heavier class, or more than three smaller classes be coupled together. When coupled, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades road engine and helper must not be cut off from train at the same time without hand brakes being securely set.

4(a). Pushing trains out of yards:

No engine will be placed behind wooden underframe caboose or other wooden frame equipment.

Engines weighing more than 320,000 pounds on the drivers will not be placed behind steel underframe cabooses.

Air will not be coupled through pusher engine.

Yard engines regularly so used will be equipped with Russell-Jordan device to hold the coupler pin from dropping, thus making it unnecessary for employes to uncouple the pusher engine when cutting off.

In no case shall the knuckle be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

5. While train is on main track oscillating red light on rear of trains so equipped must be operated continuously by night, and by day when range of vision is impaired by fog, rain, or other adverse condition. Light must be extinguished when train is clear of main track. Red light shall be turned on and turned off by trainmen. Display of red light does not relieve conductors or engineers from providing proper flag protection, or from complying with other rules.

20. Passenger equipment handled in freight trains must be placed between cars equipped with Carmer cutting lever.

Cars with inoperative couplers, containing perishables or live stock, may be chained in train and moved to nearest available repair point. Other cars with defective couplers will be switched to the rear of caboose using operative coupler by turning car. Car and caboose should be chained to prevent breaking away from train. Cars chained may be moved to nearest repair point in direction train is moving.

25. Electric lamps may be used for displaying white light only, except that yardmen may use electric lamp with green light in giving signals to trains entering or leaving yard tracks during night hours.

26. When necessary to make a reverse movement in yards with a Diesel engine equipped with operating cab on each end, engine crew or others making the move will place themselves in lead operating cab in direction of movement.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
A	70	50	30
AC	60	40	25
B	50	35	30
C	40	35	30
DEF-1 (6122 to 6137)	65	50	30
DEF-1 to 12 (6138 to 6339)	55	50	30
DEP	79	70	30
DERS-1 to 12	50	40	40
DERS-200, 201	40	40	40
DES-1 to 8, 100 to 110	40	40	40
DES-200, 201	30	30	30
F	50	40	30
GS	75	50	30
M	50	35	25
Mk-2, 4	40	30	30
Mk-5, 6, 7, 8, 9	50	40	30
Mk-10, 11	35	30	30
MM	35	30	25
Mt	75	50	30
P-1, 3, 4, 5, 6, 11	65	50	30
P-7, 8, 10, 12	75	50	30
S, SE	20	20	20
SP	50	35	30
T-1, 8, 23, 28, 31	50	35	30
T-26, 32, 37, 40	60	40	30
TW	40	30	30
Any engine not listed	35	35	25

Steam engines operated in backward motion, and DEF and DEP class engines operated with engineer in other than the lead unit in direction of movement, must not exceed 30 MPH on all curves and 20 MPH when approaching highway or street crossings at grade.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Engines with tenders having water capacity of 7,000 gallons or less, except classes 70-R-1 and 70-SC-1, must not exceed 50 MPH.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers	20 MPH
When all weight has been removed from only one wheel of any pair of drivers	30 MPH
When engine truck is removed	20 MPH
When main rod only is removed	30 MPH
When side rod only is removed	30 MPH
When both main and side rods are removed	20 MPH

Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine or equipment is to be moved. Any such engine must not be handled in train until train-order designating maximum speed is issued.

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 30 MPH; and Diesel engines the speed shown for same engine running forward light.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

When train-order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Cars and loads with height, width or weight greater than maximum shown in Line Clearance Circular (when movement is authorized)	40	25
Twin or multiple loads	40	25
Scale test cars	40	30
Cars with arch bar trucks	40	30
Steel pile-drivers	40*	30*
Relief outfits with steam derrick, except	35*	25*
(Relief outfits 7014 and 7025 must not be operated on any branch)		
Power shovel on own wheels	35*	25*
Ditchers on own wheels, except	35*	25*
SPMW-4044	25*	25*
Car-top ditchers, if blocking and tie-down cables are removed	35*	25*
K&J, Western, and Oliver, pedestal or center-hinged air-dump cars	35*	25*
Locomotive cranes.		
With boom disconnected, heavy end forward	35*	25*
With boom disconnected, light end forward	20*	15
With boom in place, either end forward	25*	15
Rotary snow plows	25	15

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed boards.

OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT AND MIXED TRAINS
Baggage-express cars SP-5810 to 5874, incl.	60	50
Foreign steel-wheel cars not equipped with high speed trucks	60	50
Trains handling not more than three wooden underframe passenger carrying cars	50*	50*
Trains handling more than three wooden underframe passenger carrying cars	40*	40*
Trains of deadhead equipment, with caboose	50	..
Passenger trains, with caboose	50	..
Engine and caboose only, except	..	50
must not exceed speed for same engine running forward light.		
Engine, flanger and caboose only, except	..	40
On curves	..	30
Logs loaded on flat or logging cars, except	..	25
On curves	..	20
Through truss bridges, tunnels, and passing stations	..	15
Trains handling beets loaded in rack equipped flat cars	..	40

*Wooden underframe passenger carrying cars must not be handled in regular passenger trains. When handled in other than regular passenger trains they must be kept together and handled on the rear.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Passenger carrying cars, baggage, express and other head-end cars, unless equipped with steel center sills and steel platforms must not be handled in passenger trains except on authority of Superintendent.

When foreign steel-tired or all-steel wheel cars are picked up at points where no car inspectors are on duty, conductor must contact train dispatcher to determine applicable speed restriction for the movement.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

Where mail, papers, or ice are to be dispatched from passenger trains at points where train does not stop, slow down sufficiently to permit safe dispatch without hazard, and stop at such stations for this purpose if train is moving on adjoining track between passenger train and point of exchange.

RULE 10 (J). Round yellow speed boards indicate the speed restrictions applying to Streamliner CITY OF SAN FRANCISCO with DEP class engine only.

Speed boards placed on the right of track in current of traffic direction but with one track intervening:

Eastward at MP 89.50 Sacramento bears figure 15,
Eastward at MP 132.58 Brighton bears figure 25.
Westward at MP 106.60 Roseville bears figures 20-15,
Westward at MP 91.70 Sacramento bears figures 35-15,
Westward at MP 90.75 Sacramento bears figure 15,
Westward at MP 90.25 Sacramento bears figure 10.

Speed boards placed to the left of track in current of traffic direction but with one track intervening:

Eastward at MP 104.35 Roseville bears figures 20-15.

RULE 14(e). As specified below, — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Roseville on Roseville-Tehama line,
Brighton on Sacramento-Placerville line.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
85.51	Sacramento	95.35
	" (Walnut Grove Branch)	93.09
	" (Placerville Branch)	94.93
131.60	" (Stockton line)	136.33
101.66	Roseville (Eastward and No. 2 Track)	110.87
101.66	" (No. 1 and Westward Track)	110.87
	" (Tehama line)	107.71
103.80	Citrus	105.26
	" (Fair Oaks line)	106.48
	Folsom	112.05
110.57	" (Placerville Branch)	111.38
148.19	Placerville	149.66
110.64	Walnut Grove	113.90
121.05	Isleton	122.32

Sacramento: Westward trains on station tracks must not pass fouling point of adjoining tracks unless proceed signal received from yardman at Second St.

Eastward trains and yard engines on station tracks must not pass fouling point of adjoining tracks unless proceed signal received from yardman at Sixth St., and again at Seventh St.

Westward trains on main track must not pass Seventh St. shanty (just west of Signal 891) unless proceed signal received from yardman.

Eastward trains on main track must not pass fouling point of crossover between main tracks, 400 feet east of Sacramento River Drawbridge unless proceed signal received from yardman at Second St., and must not pass first switch of crossover between main tracks west of Sixth St. shanty (1500 feet east of Sacramento River Drawbridge) unless proceed signal received from yardman at Sixth St.

The two center tracks, for entering and leaving station tracks are equipped with automatic block signals between Sixth St. and Seventh St. Signal 889 will display green aspect when route lined for direct movement to Sixth St., and yellow aspect when route lined for crossover movement to Sixth St. Signal 886 governs movements from station tracks 2, 3, 4 and 5 but does not indicate position of switch 20 feet east of the signal.

Roseville: Eastward trains except first-class, must not pass Dry Creek bridge unless proceed signal received from yardman.

Eastward first-class trains to Tehama line must make station stop with rear end clear of west drill track.

Westward trains except first-class, moving on westward main track, or on west drill or west yard tracks, must not pass fouling point of switch to westward main track just east of scale house (east of subway) unless proceed signal received from yardman.

Eastward trains finding Signal 1064 displaying stop indication must stop, and may proceed only when proceed signal received from yardman. Upper unit governs movement on No. 2 Track; lower unit governs movement on Tehama line.

Signal 1055 governs movement against current of traffic on eastward main track, and when such moves are authorized by yardmaster, trains stopped by this signal may proceed with caution not exceeding 4 MPH.

RULE 98. Railroad crossings at grade not interlocked:

Sacramento: WPRR at Front and R Sts.—Trains and engines must approach with caution expecting to find crossing occupied.

Switching and industry tracks in vicinity of Front and R Sts.—Ascertain that each crossing is clear before using.

SNRy at Front and R Sts.—Stop within 200 feet of crossing.

Electric line at Front and M Sts.—Stop and not proceed unless hand signal received from flagman on ground (green flag by day, green light by night).

SNRy at 31st and R Sts.—Stop before crossing.

Roseville: Eastward main track of Tehama line crosses No. 1 Track of Sparks line and west drill track at passenger station. Trains or engines moving on either direction on west drill track or against current of traffic on No. 1 Track may move over this crossing without stopping, provided crossing is seen to be clear and no train or engine approaching on intersecting line, and proceed signal is received from yardman.

RULE 99. Roseville: Westward trains except first-class, having received proceed signal from yardman to pass Signal 1065 or 1067 to move on westward main track, and rear of train having passed either of these signals, need not provide flag protection to the rear if stopped or delayed, until rear end passes subway. Protection between these points will be the responsibility of yardmaster or his representative. Protection east of these signals, and beyond subway must be provided by train or engine crew.

RULE 103. (A). Trains and engines must stop and be preceded by flagman before crossing highways at:

Isleton, on wharf spur.

RULE 104. The normal position of rigid switches at junctions:

Citrus—Fair Oaks line, for Placerville line,
Folsom Jct.—Folsom line, for Placerville line.

RULE 505. AUTOMATIC BLOCK SYSTEM

Sacramento: Eastward main track from a point 350 feet east of Sacramento River Drawbridge to Signal 890 at Seventh St., is not protected by block signals. All trains must proceed with caution between these points.

RULE 535. Spring switch on east end house track leading to drill track, just west of Yosemite St., Roseville.

SPECIAL SIGNALS

Sacramento: Movements over crossings at Front St. just east of Sacramento River Drawbridge governed by signals and derails operated by switchtender at Front St. (except derail on westward main track, which is operated by signal operator on bridge), and do not indicate position of switches or occupancy of track between signals and crossing. Trains and engines moving on proceed indication of signals must see that switches are properly lined for them and that track is not obstructed by other cars or engines. Locations are as follows:

Westward main track—350 feet east of crossing,
Eastward main track—For movement against current of traffic, 350 feet from crossing,
Station tracks—350 feet from crossing. Green aspect for movement to westward main track; yellow aspect for movement through crossover to eastward main track,
Front St. Track—100 feet from crossing of main tracks,
Pioneer Mill Track—also governs movement to store lead,
No. 4 Track—also governs movement to No. 5 Track,
No. 6 Track—also governs movement to No. 7 Track.

If signal 350 feet east of Front St. crossing governing movement on westward main track or from station tracks does not indicate proceed, trains or engines after stopping may proceed on signal from switch tender to clearance point of Front St. crossing, yellow flag by day, yellow light by night.

RULE 605. INTERLOCKING

Sacramento River Drawbridge: Eastward trains failing to receive green aspect in approach Signal 878 must stop west of road crossing, 1030 feet east of Signal 878, unless semi-automatic signal at MP 88.4 indicates "proceed".

Nineteenth Street, Sacramento: At crossing of R Street track with WPRR.

Yard engines using industry spurs will give following signal from push button located on home signal 400 feet west of crossing:

To Valley Grocery spur, o — —,
To Bekins spur, — o —.

Elvas: Limits on Sacramento-Roseville line extend from interlocking home signal 1,400 feet west of tower to interlocking home signal 1,200 feet east of tower, and on Elvas-Polk line to interlocking home signal at west switch Polk; and on Placerville Branch to interlocking home signal 600 feet east of junction switch.

Following switches and derails within interlocking limits are hand operated and must not be thrown until permission has been obtained from signal operator:

American Can Company spur switch and derail. Derail is electrically locked.

Crossover, middle siding, Elvas, to westward track, Elvas-Polk line.

Crossover, middle siding, Elvas, to eastward track, Polk-Elvas line.

West switch and derail, middle siding, Elvas.

Hopfen spur switch and derail.

Meister's spur switch and derail. Derail is electrically locked.

Permission must be obtained for each movement into or out of American Can Company and Meister spurs.

Hand signals as required by Rule 628 may be given from the tower instead of from the ground.

Whistle signals governing routes as follows:

To Roseville, — o o o o,
To Sacramento, — — — o,
To Polk, — — o o o,
To Elvas siding, o o o — —,
To Third track, o o — —,
To American Can spur, — o —,
To Meister's spur, o — —.

Westward trains will repeat signal approaching Elvas if route not lined.

Snodgrass Slough Drawbridge: At MP 111.42 on Walnut Grove Branch.

Georgiana Slough Drawbridge: At MP 119.53 on Walnut Grove Branch.

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

GENERAL REGULATIONS

RULE 827. Westward freight trains will stop 10 mins. at MP 123, Placerville Branch, for heat radiation, at which time train inspection will be made, and enginemen will inspect engines.

RULE 829. Ben Ali: Kathleen Ave. crossing must not be blocked unnecessarily. No cars may be spotted within 300 feet of this crossing on any yard track, except team track.

RULE 873. Blow-off cocks, sanders or sprinkler valves must not be operated, and boosters or injectors must not be started, while engine is standing on, or passing over, puzzle switch, Sacramento.

AIR BRAKE RULES

RULE 17. Retainers must be used on freight and mixed trains on descending grades as follows:

On Placerville Branch:

MP 131.7 to MP 123. One retainer for each 140 Ms in train.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

RULE 25. Rear end test must be made immediately prior to leaving Placerville on westward trains.

RULE 33. Gross tonnage of any freight train must not exceed the Ms per operative brake between the stations shown below:

Placerville to Folsom Jct.—100 Ms.

PASSENGER TRAINS

RULE 38. Road test must be made at Brighton only if continuity of brake pipe has been disturbed.

MISCELLANEOUS

1. Take water only in emergency at Shingle Springs.

5. Stop sign at Roseville on Circuit Drive where switch leads into car repair tracks. All engines must stop at this sign and proceed with caution.

Sacramento: Stationmaster will inform conductor or member of crew when passenger train is ready to depart, and trainmen must be so distributed as to give proceed signal by hand or lamp. The use of communicating signal to start trains is not permitted, except on Streamliner CITY OF SAN FRANCISCO.

10. Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
AC, Mt-2	Sacramento	Umbrella sheds at passenger station
DERS-2	Folsom	East of east yard limit board

Load limit (car and contents):

Sacramento-Roseville	251,000 pounds
Brighton-Elvas	251,000 pounds
Sacramento-Isleton	210,000 pounds
Sacramento-Brighton via R St.	240,000 pounds
Brighton-Placerville	210,000 pounds
Folsom Jct.-Folsom	210,000 pounds
Citrus-Fair Oaks	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description	
88.54	Sacramento	Sacramento River bridge	Side
92.15	Elvas	American River bridge	Side
	(Placerville Branch)		
122.3	East of White Rock	Rock cut	Side
126.4	Latrobe	Rock cut	Side
126.5	East of Latrobe	Rock Cut	Side
128.6	East of Latrobe	Rock cut	Side
	(Walnut Grove Branch)		
92.41	East of Baths	Bridge	Side
111.42	Snodgrass Slough	Bridge	Side

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
On "R" St. Sacramento, between Front St. and Brighton	10
On Golden State Cannery track, Isleton	10
On Mather Field spur	10
On back tracks or engine leads to Roundhouse, Sacramento	8
On American Can Company tracks, Elvas	8
On tracks serving McClellan Field (Planehaven)	10
On spur to Government lumber yard and Camp Kohler, Walerga	10

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, SACRAMENTO TO ROSEVILLE:					
MP MP					
88.54 to 89.50	10	10	10	10	10
89.50 to 90.00	15	15	15	15	15
90.00 to 91.70	35	35	15	15	15
91.70 to 92.56 (Interlocking and bridge)	25	25	15	15	15
92.56 to 95.00 (Ben Ali)	50	50	30	30	30
95.00 to 103.25	79	70	40	40	30
103.25 to 105.10	40	40	15	15	15
105.10 to 106.66 (Roseville)	20	20	15	15	15
EASTWARD, BRIGHTON TO ELVAS:					
133.20 to 133.33	..	65	50	50	30
133.33 to 133.35 (end double track)	..	25	25	25	20
133.35 to 136.00	..	40	35	35	30
136.00 to 136.31 (91.70) (Wye to Sacramento)	..	25	15	15	15
136.00 to 136.33 (92.00) (Wye to Roseville)	..	25	15	15	15
EASTWARD, BRIGHTON TO PLACERVILLE:					
94.67 to 111.10	..	30	30	30	20
111.10 to 139.00	..	20	20	20	15
139.00 to 139.30 (Tunnel and curve)	..	10	10	10	10
139.30 to 148.70	..	20	20	20	15
EASTWARD, FOLSOM JCT. TO FOLSOM:	..	20	20	20	15
EASTWARD, CITRUS TO FAIR OAKS:	..	20	20	20	15
EASTWARD, SACRAMENTO TO ISLETON:					
89.59 to 114.50	..	20	20	20	15
114.50 to 121.90	..	15	15	15	15

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
WESTWARD, ROSEVILLE TO SACRAMENTO:					
MP MP					
106.66 to 104.85	20	20	15	15	15
104.85 to 103.25	40	40	15	15	15
103.25 to 95.00 (Ben Ali)	79	70	40	40	30
95.00 to 92.56	50	50	30	30	30
92.56 to 91.70 (Bridge and interlocking)	25	25	15	15	15
91.70 to 90.00	35	35	15	15	15
90.00 to 89.50	15	15	15	15	15
89.50 to 88.54	10	10	10	10	10
WESTWARD, ELVAS TO BRIGHTON:					
136.33 to 135.24 (Wye from Roseville)	..	25	15	15	15
136.31 to 135.99 (Wye from Sacramento)	..	25	15	15	15
135.24 to 133.33		40	35	35	30
133.33 to 133.20		70	50	50	30
WESTWARD, PLACERVILLE TO BRIGHTON:					
148.70 to 139.30	..	15	15	15	15
139.30 to 139.00	..	10	10	10	10
139.00 to 122.00	..	15	15	15	15
122.00 to 111.10	..	20	20	20	15
111.10 to 94.67	..	30	30	30	20
WESTWARD, FOLSOM TO FOLSOM JCT.:	..	20	20	20	15
WESTWARD, FAIR OAKS TO CITRUS:	..	20	20	20	15
WESTWARD, ISLETON TO SACRAMENTO:					
121.90 to 114.00	..	15	15	15	15
114.00 to 89.59	..	20	20	20	15

No. 442 (CCM) when consist contains no restricted cars, may operate at passenger speeds shown in Column 1, except maximum speed must not exceed 50 MPH.

♦RESTRICTED CARS are listed on page 6 under "Maximum Speed Permitted with Certain Equipment", and trains handling must not exceed maximum speed of 40 MPH.

SPECIAL INSTRUCTIONS—SACRAMENTO SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Brighton and Roseville Sacramento and Roseville	Placerville to Folsom	Folsom to Placerville	Folsom to Brighton	Brighton to Folsom	Sacramento to Isleton
DEP-3	6017	7500	....	....	....	....	....
DEP-4, 7	6000 to 6004 and 6018	7500	....	....	....	....	....
DEP-5, 6	6005 to 6016	13700	....	....	....	....	....
DEP-8	6019 to 6022	18500	....	....	....	....	....
DEF-1	6122 to 6137	....	....	....	....	....	....
DEF-1, 2	6138 to 6179	20000	....	....	....	....	....
DEF-3, 4, 5, 6	6180 to 6339	20000	....	....	....	....	....
DERS-2, 4 to 9, 11	5203 to 5249, 5501 and 5502	10000	3650	1950	10000	8250	....
DES-1 to 8	1000 to 1032	3200	800	560	2300	1450	2400
DES-100 to 109	1300 to 1441	4800	1400	980	3850	2500	4000
DES-200, 201	1900 to 1903	1550	460	310	1350	950	1240
M-4	1617 to 1713	4600	1250	780	3750	2300	3400
M-6, 8	1721 to 1803, 1824 and 1825	5400	1550	990	4600	2850	4150
M-9	1804 to 1822, 1826 to 1830 and 1836	5650	1650	1050	4850	3000	4400
M-11	1832 to 1835	5900	1650	1050	4850	3000	4400
T-1	2248 and 2252	3900	1100	700	3350	2100	3100
T-8	2178	2800	790	480	2400	1450	2100
T-23	2301 to 2310	5650	1650	1050	4850	3000	4400
T-26	2296 and 2299	4850	1400	860	4250	2700	3900
T-28, 31	2312 to 2362	6200	1800	1150	5300	3250	4800
T-32	2363 to 2370, 2372 to 2384	6200	1800	1150	5400	3450	5050
T-40	2371	6200	....	....	....	....	....
T-37	2105 and 2106	5500	1650	1050	4800	2950	4250
P-1, 3, 5	2404, 2408, 2411, 2412, 2417, 2428 to 2433, 2439 to 2452 and 2459	5000	1350	810	4300	2550	3800
P-1	2403, 2405 to 2407 and 2415	5000	1350	810	4300	2550	3800
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450	1500	900	4750	2800	4150
P-6	2453, 2454 and 2458	6150	1800	1100	5350	3300	4750
P-7	2476 and 2477	6550	1950	1200	5700	3500	5050
P-8, 10	2461 to 2474, 2478 to 2483	7300	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	7300	....	....	....	....	....
P-11	3104 and 3109	5350	1550	970	4650	2850	4100
P-12	3120 to 3129	7200	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2625 to 2860, 3440 to 3469	6850	2000	1300	5800	3550	5200
C-18	3400 to 3409	6300	1850	1200	5350	3300	4750
C-19	3410 to 3426	6600	1900	1250	5550	3450	4950
TW-1	2900 to 2913	5250	1500	980	4450	2700	3950
TW-2, 3	2937 to 2952	4250	1200	780	3550	2200	3200
TW-8	2914 to 2923	5950	1700	1110	5050	3100	4600
A-3	3025 and 3057	3850	....	....	....	....	....
A-6	3000 and 3002	4750	....	....	....	....	....
Mk-2, 4	3201 to 3240	7750	....	....	....	....	....
Mk-5, 6	3241 to 3277	8700	....	....	....	....	....
Mk-7, 8, 9	3300 to 3324	9650	....	....	....	....	....
Mk-10	3295	7450	....	....	....	....	....
Mk-11	3297 and 3298	6800	....	....	....	....	....
B-1	3500 to 3509	10850	....	....	....	....	....
F-1	3611 to 3652	9950	....	....	....	....	....
F-3, 4, 5	3653 to 3769	11450	....	....	....	....	....
MM-3	3930 and 3931	13000	....	....	....	....	....
AC-4, 5	4100 to 4125	18000	....	....	....	....	....
AC-6 to 12	3800 to 3811, 4126 to 4294	19100	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	9200	....	....	....	....	....
Mt-2	4385 to 4390	9900	....	....	....	....	....
GS-1, 2	4401 to 4415	9900	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469	10300	....	....	....	....	....
SP-1, 2, 3	5000 to 5048	13450	....	....	....	....	....

In figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms; except between Folsom and Placerville add 3 Ms for each such car of 55 Ms or less.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 10 (J). Round yellow speed boards indicate the speed restrictions applying to Streamliner CITY OF SAN FRANCISCO with DEP class engine only.

Speed boards placed to the right of track in current of traffic direction but with one track intervening:

Eastward at MP 106.7 Roseville bears figure 35-25.

Speed boards placed to the left of track in current of traffic direction but with one track intervening:

Eastward at MP 104.35 Roseville bears figures 20-15.

Speed boards on No. 1 Track and on No. 2 Track between MP 111 and MP 133 are to the right of track for current of traffic movement.

Oval speed boards three-fourths mile east of east switch Truckee on No. 1 Track; and at west switch Colfax on No. 2 Track have figures 35 on upper left side, 30 on lower left side, and 20 on right side.

35 indicates speed allowed for passenger trains on tangent track.

30 indicates speed allowed for passenger trains on curves.

20 indicates speed allowed for all other trains, except that light engines may make allowable speed as shown in Speed Restrictions table.

RULE 11. Between Gold Run and Truckee from Nov. 1st to May 1st, train finding a fusee burning along or near track must stop, and then proceed with caution not exceeding 15 MPH for a distance of three-fourths mile.

RULE 14(e). As specified below, — — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Roseville on Tehama line.

RULE 14(l). Westward trains will sound crossing whistle signal immediately after emerging from west portal of Tunnel No. 6, west of Donner.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
101.66	Roseville (Eastward and No. 2 Track)......	110.87
101.66	“ (No. 1 and Westward Track)	110.87
	“ (Tehama line)...................	107.71
119.34	Newcastle (No. 2 Track)................	120.82
118.74	“ (No. 1 Track)................	120.15
140.03	Colfax............................	142.94
169.94	Emigrant Gap......................	172.12
207.28	Truckee...........................	209.09
241.63	Sparks............................	247.60

Yard limit boards located to left of track:

Approaching Truckee in both directions.

Roseville: Eastward trains except first-class, must not pass Dry Creek bridge unless proceed signal received from yardman.

Eastward first-class trains to Tehama line must make station stop with rear end clear of west drill track.

Westward freight trains on No. 1 Track must not pass Yosemite St. unless flashing yellow light is displayed in high special signal opposite yard office, and must not pass Signal 1067 unless proceed signal received from yardman.

Westward trains finding Signal 1067 displaying stop indication must stop, and may then proceed with caution if proceed signal received from yardman.

Westward trains except first-class, moving on westward main track, or on west drill or west yard tracks, must not pass fouling point of switch to westward main track just east of scale house (east of subway) unless proceed signal received from yardman.

Westward first-class trains and trains of passenger equipment, when engines are to be changed, must stop before passing Signal 1067.

Eastward trains finding Signal 1064 displaying stop indication must stop, and may proceed only when proceed signal received from yardman. Upper unit governs movement on No. 2 Track; lower unit governs movement to Tehama line.

Sparks: Semaphore Signal 2452 on signal bridge governs main track movements on eastward main track. Lower arm of Signal 2452 on signal bridge governs diverging-route movement from eastward main track across westward track into freight yard. Dwarf light Signals 2453 and 2459 govern main track movements on westward main track.

Following main track not protected by block signals:

Eastward, from 1400 feet east of engine lead switch at MP 245.5 to Signal 2462.

Westward, from east switch of crossover forming end of double track to Signal 2459.

Light Signal 2455 governs movement from engine lead to eastward main track. When this signal indicates “stop,” engine must after stopping at signal, proceed only on hand signal from yardman. Yardman must not give signal to engineer until trains moving on eastward main track have stopped or crossover switches are lined from eastward main track into freight yard, protecting movement.

RULE 98. Railroad crossings at grade not interlocked:

Roseville: Eastward main track of Tehama line crosses No. 1 Track of Sparks line and west drill track at passenger station. Trains or engines moving in either direction on west drill track or against current of traffic on No. 1 Track may move over this crossing without stopping, provided crossing is seen to be clear and no train or engine approaching on intersecting line, and proceed signal is received from yardman.

RULE 99. Roseville: Westward trains except first-class, having received proceed signal from yardman to pass Signal 1065 or 1067 to move on westward main track, and rear of train having passed either of these signals, need not provide flag protection to the rear if stopped or delayed, until rear end passes subway at west end Roseville yard. Protection between these points will be the responsibility of yardmaster or his representative. Protection east of these signals, and beyond subway must be provided by train or engine crew.

RULE 102. Should a passenger train break in two or an emergency application of brakes occur while in motion on the grade between Colfax and Truckee, forward brakeman will immediately go towards rear, close angle cock at opening if train is parted, set hand brakes, and turn up retainers on detached portion. After train is coupled air must be applied from engine before hand brakes and retainers are released.

If necessary to leave detached portion on main track, rear truck of detached portion ascending grade or lead truck of detached portion descending grade must be blocked or chained in such manner as to derail car should they start.

RULE 107. Roseville: Westward trains must not pass Yosemite St. when eastward passenger train is doing work at the station, unless proceed signal received from yardmaster or his representative, green flag by day, green light by night.

RULE 505. AUTOMATIC BLOCK SYSTEM

Midas: Push buttons near Signals 1559 and 1601.

Instructions for operation posted inside push button box and in special instructions for all subdivisions.

RULE D-508. Signals govern movements in both directions on No. 1 Track and No. 2 Track between crossover at Emigrant Gap and Andover.

Signals govern movements in both directions on No. 1 Track between MP 111.89 and Newcastle.

Rule 509 (F) as applied to single track, or 509 (J) will apply when these signals display stop indication for trains moving against the current of traffic.

RULE 510. The following block signals, equipped with triangular plate displaying the letter "P", have included in their control limits some special protective device.

Eastward	Protection	Westward
P-1214	Collision detector, highway underpass, MP 121.94	
P-1242	Collision detector, highway underpass, MP 125.53	
	Collision detector, highway underpass, MP 133.35	P-1347
P-1374	Collision detector, highway underpass, MP 137.68	
P-1438	Slide detector fence MP 144.5	
P-2146 P-2164	Slide detector fence MP 216.5	P-2181 P-2165
P-2220	Slide detector fence MP 222.5	P-2239

SPECIAL SIGNALS

Floriston: Light type special signal at MP 222.40 applies to No. 1 Track only, and indicates condition of slide detector fence only and is not connected with block signal circuit. Lunar white aspect indicates track at slide detector fence safe for trains; red aspect requires that inspection must be made of track protected by slide detector fence before train passes the fence.

RULE 535. SPRING SWITCHES

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Roseville	East end east drill track	No. 2 Track
Roseville	East end house track	East drill track
Midas	West end siding	No. 1 Track

To avoid stopping on spring switch east end east drill track Roseville, trains on east drill must stop at fouling point if Signal 1074 east of switch displays stop indication.

Movements against current of traffic governed by switch point indicator. See Rule 535, page 3.

Midas: Westward train on siding to permit train to pass will stop after passing "Approach Circuit" sign, and if Signal 1599 displays proceed indication must send member of crew to operate time-release transferring signal indication to main track signal. If additional trains are to pass, time-release must be operated for each one after rear of preceding train has reached a point 200 feet west of west switch. Signal 1599 will display "Proceed prepared to stop at next home signal" indication when train which has just passed clears the block.

Movements against current of traffic governed by switch point indicator. See Rule 535, page 3.

RULE 605. INTERLOCKING

Emigrant Gap: Limits as follows:

On No. 1 Track from interlocking signal located 100 feet west of house track spur to Signal 1711, 500 feet west of turntable.

On No. 2 Track from fouling point of crossover to Signal 1716, 60 feet east of east switch of crossover.

Electrically operated derail located 60 feet west of interlocking signal west of house track spur switch on No. 1 Track.

When instructed to operate derail by hand, be governed by instructions on sign at derail.

East switch of crossover equipped with electric lock.

Derail located at fouling point on east lead of turn-table and equipped with electric lock.

Trainmen or enginemen will not unlock or throw the west switch of crossover when making crossover movement, until the east switch of crossover has been lined.

Trainmen or enginemen will not unlock or throw switch to east lead of turn-table until derail has been closed.

Westward movement from west lead of turn-table or from firetrain crossover will not be made until permission is given by operator.

Norden: Interlocking limits extend on No. 1 Track from westward signal 100 feet east of east switch Eder crossovers to eastward signal 100 feet west of west switch Eder crossovers; and from westward signal 200 feet west of west switch Donner siding to signal bridge 775 feet west of Norden train-order office, and interlocking limits on No. 2 Track extend from signal bridge 775 feet west of Norden train-order office to westward signal 300 feet east of Eder crossovers. Both crossovers at Eder are under control of signal operator at Norden. Both switches of east crossovers are power operated, and both switches of west crossover are hand-throw switches, but equipped with electric locks which must be released by operator before they can be hand-thrown.

On No. 1 Track, westward movement governed by two-unit signal 100 feet east of Eder crossovers, upper unit for No. 1 Track and lower unit for diverging route through crossover. Eastward movement on No. 1 Track governed by single unit signal 100 feet west of Eder crossover.

On No. 2 Track eastward movement governed by two-unit signal 50 feet west of Eder crossovers, upper unit for No. 2 Track and lower unit for diverging route through east crossover. Westward movement on No. 2 Track governed by single unit signal 300 feet east of Eder crossovers.

When desired to use west crossover at Eder consult operator at Norden by phone to release electric lock. Train must not pass interlocking signal until both switches have been lined. Electric locks cannot be released with train standing between interlocking signals.

Telephones are located on shed post near eastward signal on No. 1 Track, and in shanty at east end of snowshed on No. 2 Track.

When instructed by signal operator to hand throw power operated switches, carefully follow instructions posted near telephones.

Fire Train spur—Switch and derail hand operated, derail electrically locked and must not be thrown until permission has been obtained from signal operator.

Run-around tracks—Trains or engines occupying run-around track must obtain permission from signal operator before lining switch to siding.

Spur track switches must not be lined for movement to siding without first obtaining permission from signal operator.

When permission is given by signal operator to eastward trains to pass interlocking signals located on main track and on siding east end of Norden, trains must wait ten minutes and then be preceded by flagman according to rules and follow flagman 10 minutes to next home signal or clear distant signal.

When interlocking home signal located approximately 300 feet west of west switch at Donner indicates "Stop", westward trains will stop to clear west switch of Donner siding.

Two indication light signals on westward turn-table lead to No. 2 Track, Norden. Signal is located on left side of track and 92 feet east of Signal 48-a, and is a repeater signal used in connection with Signal 48-a, governing westward movement from turn-table lead to No. 2 Track.

Westward interlocking signal on No. 1 Track, 240 feet east of Norden station building will be connected with repeater signal on the left side of track for better visibility.

Call-on signals on certain interlocking signal masts are normally dark, but when displaying flashing yellow light are authority to pass interlocking signal at stop without obtaining permission from operator to couple to train or engine; movement to be made with caution.

Within Norden interlocking trains may occupy main track without rear end protection. Signal operator must not authorize a train to pass interlocking signal in stop position until he has assured himself that conductor and engineer of all trains involved are fully acquainted with intended move so that proper protection will be provided.

When westward trains are moved against current of traffic Eder to Norden, no eastward train or light engine may be permitted to occupy No. 2 Track between signal bridge 775 feet west of train-order office and east switch Norden except for movement from No. 2 Track to siding.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
		EASTWARD	
M	7-ft. mast	Bowman	Proceed to Colfax.
M	1408	Colfax	Proceed to train-order office.
S	1408	Colfax	Enter siding.
M	1514	Gold Run	Proceed to Midas.
M	7-ft. mast	Midas	Proceed to Knapp.
M	1642	Knapp	Proceed to Emigrant Gap.
S	1642	Knapp	Enter siding.
M	1656	East end siding Knapp	Enter eastward track and proceed to Emigrant Gap.
M	1706	Emigrant Gap	Proceed to train-order office.
S	1706	Emigrant Gap	Enter siding.
M	1850	Troy	Proceed to Norden.
		WESTWARD	
M	2331	Verdi	Proceed to Hinton.
M	2201	Hinton	Proceed to Truckee.
M	2091	Truckee	Proceed to train-order office.
S	2091	Truckee	Enter westward siding.
M	1863	Troy	Proceed to Yuba Pass or next siding where train can get into clear.
S	1863	Troy	Enter siding expecting to pass a train on main track.
W	1853	Troy	Wait 15 minutes for following train or light engine to pass.
M	1611	Midas	Proceed to Gold Run.
S	1611	Midas	Enter middle siding expecting to pass a train on main track.
W	1601	West end Midas	Wait 15 minutes for following train or light engine to pass.
M	1539	Gold Run	Proceed to Colfax.
S	1297	Bowman	Enter westward siding expecting to pass a train on main track.
W	1277	West end Bowman	Wait 15 minutes for following train or light engine to pass.

Trains desiring to enter siding at Troy or Midas and finding signal displaying stop indication and not displaying illuminated letter type indicator, must secure permission from train dispatcher.

GENERAL REGULATIONS

RULE 825. Portable rail skids are hung on posts at lower end of sidings at the following stations:

Bowman Gold Run Midas Knapp Hinton Verdi

When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher, after which rail skid must be placed on rail and leading wheel of first car in descending direction run onto the rail skid, and hand brakes set if brakes are operative before engine is detached.

Trains picking up cars from these sidings must remove rail skid and return it to proper post and lock it in place with switch lock.

RULE 827. Freight trains handled by steam engine will stop between switches, as indicated, at the following stations for heat radiation, at which time train inspection will be made, and enginemen will inspect engines and drain water from main reservoirs and dirt collectors on engine:

Eastward		Westward	
MP 202.00 (Stop must be made west of Culvert 202.31)	10 mins.	Troy	10 mins.
		Yuba Pass	10 mins.
		Knapp	5 mins.
Truckee	10 mins.	Midas	10 mins.
		Gold Run	10 mins.
		Bowman	10 mins.

During stormy weather when snow on ground, stop may be made at Crystal Lake instead of Yuba Pass, and in that event stop of 5 mins. will be made at Emigrant Gap. Stop may be made at Auburn instead of Bowman in event Bowman occupied, or if necessary to let a train by at Auburn.

Light engines not equipped with tire coolers, on descending grade, will stop at Truckee, Emigrant Gap and Colfax a sufficient length of time to permit heat radiation, at which time enginemen will inspect engines.

On freight trains between Lawton and Loomis, a member of the crew must observe track to rear of train for evidence of derailment or any other condition requiring immediate stopping of train. Two Dietz lanterns placed on rear of caboose will be used at night to assist in observing track. When practicable, member of crew must ride rear platform or in rear car on all trains and in a position to observe fire that may be set from moving train while passing through wooden-lined tunnels and over open-deck wooden trestles.

AIR BRAKE RULES

RULE 17. Retainers must be used on freight and mixed trains on descending grades as follows:

Norden to Truckee: One valve for every 120 Ms in train.

Summit to Yuba Pass: One valve for every 140 Ms in train.

Yuba Pass to Loomis: One valve for every 100 Ms in train.

Exception: If tonnage exceeds the amount of Ms specified for each retainer, trains may be handled Yuba Pass to Loomis with up to 110 Ms, and Norden to Truckee with up to 125 Ms per operative retainer if necessary. Not necessary to turn down retainers at Loomis unless stop is made for other reason.

Retainers must not be turned down on eastward freight trains at Truckee until engine has passed west switch of house track.

Retainers must be used on passenger trains on descending grades as follows:

Norden to Truckee: Fifty percent of retainers must be used on Nos. 22 and 26 and trains consisting entirely of mail and/or express cars, which may be turned up on rear of train, and may be turned up at Emigrant Gap instead of Norden if stop is made for any reason at that point, to avoid making stop at Norden. Additional retainers must be used if in the judgment of conductor or engineer they are necessary. Accessible retainers will be used on other passenger trains.

Summit to Loomis: All retainers.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

RULE 25. Rear end test on freight trains must be made immediately prior to leaving Norden on eastward trains; and at Truckee, Summit and Norden on westward trains.

At Colfax on ascending grade, rear end test will be made in accordance with Rule 25 (a). Whistle Signal 14 (b) from rear helper engine will indicate that brake pipe pressure has been restored and train ready to proceed.

RULE 33. Gross tonnage of any freight train must not exceed the Ms per operative brake between the stations shown below:

Norden to Truckee	125 Ms
Summit to Yuba Pass	140 Ms
Yuba Pass to Loomis	110 Ms

PASSENGER TRAINS

RULE 39. Running test must be made on westward trains just after emerging from Tunnel 6 west of Donner.

MISCELLANEOUS

1. Take water only in emergency at Blue Canon.

Westward trains and light engines must not take water at Troy except in emergency.

Eastward freight trains stopping at Colfax for water with helper engines in train, lead engine should stop clear of fouling point of siding.

Light engines in either direction must not take water at Emigrant Gap, Blue Canon, Knapp, or Colfax except in emergency, and then only sufficient to make next water tank.

After taking water at water columns at Colfax or Truckee, spout must be left cleared, and spout of eastward column pointing east, and spout of westward column pointing west.

2. Eastward passenger trains stopping at Reno, do so clear of Center St.

Eastward trains will approach crossing at Colfax with caution when westward trains are in the vicinity of the crossing.

4. Helper service:

Eastward freight trains with three AC Class engines from Roseville or Colfax will place first helper four cars ahead of caboose and second helper separated from the first by eleven cars. If C class helper added at Colfax it will be placed ahead of road engine.

Eastward freight trains from Roseville with one helper other than AC Class will place same one car ahead of caboose and if more than one helper required the engines must be separated by eleven cars.

Eastward freight trains requiring one, and not to exceed two helpers other than AC Class from Colfax will place them in train one car ahead of caboose.

Westward freight trains requiring two helpers from Truckee will place one helper next ahead of caboose and separate the second helper from the first by five cars.

Westward freight trains cutting out helpers at Summit will observe car marker boards and make stop accordingly. If cars other than caboose are to be coupled, helper will shove rear of train to a coupling, then stretch train to insure coupling properly made, after which rear end test must be made. Trainmen will then turn up retainers, after which they will notify enginemen they are ready to move to eating house.

DEF class engines, when used as helper, will be placed 18 cars ahead of caboose.

5. Stop sign at Roseville on Circuit Drive where switch leads into car repair tracks. All engines must stop at this sign and then proceed with caution.

10. Storage tanks of Standard Oil Company near tracks at MP 107.9 between Roseville and Rocklin. Flues of engines must not be sanded until engine has passed this point.

Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
F, AC, Mk, Mt, GS, DEF	Auburn	Nevada St. Spurs.
"	Clipper Gap	Team track east of road crossing.
"	Colfax	Material spur in west yard.
"	Rocklin	Team and house tracks.
"	Loomis	House tracks, Tracks 1, 2 and 3 and Pacific spur.
"	Penryn	Fruit spurs west of station.
"	Auburn	Standard Oil spur and High line.
"	New England Mills	Spur, west of tool house.
"	Magra	Spur.
"	Alta	Spur.
"	Towle	Spur.
"	Yuba Pass	Spurs.
"	Crystal Lake	Spur on south side No. 2 Track.
Engines heavier than 200,000 pounds on drivers	Newcastle	Fruit spurs 3, 4, 6 and 7, Auburn Lbr. Co. spur.
"	Emigrant Gap	Sugar Pine spur.
"	Auburn	House track.
"	Cisco	Campbell spur.
"	Troy	Lumber spur.
"	Summit	Lumber spur.
"	Truckee	Hotel spur; Standard Oil spur; Associated Oil spur; Hobart circle; Hobart team; Pat Henry spur.
"	Boca	House track and corral.
"	Floriston	Mill track and house track.
"	Verdi	House track.
"	Mogul	Spur.
	Calvada	Spur.
AC	Colfax	Corral track west of corral, bunk spur; house track and house lead east of freight house; team track beyond east end of freight house platform; scale track.

Engines turning at Colfax must begin the movement on west leg of wye, initial switch located just east of PFE icing deck.

Load limit (car and contents):

Roseville-Sparks .... 251,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

11. Tracks between Roseville and Sparks numbered, and unless otherwise authorized, will be used as double track as follows:

No. 1 westward trains, via Auburn and
No. 2 eastward trains, via Auburn, Nevada Street.

14. From May 1 to Nov. 1, sprinklers will be placed in service on westward freight trains and light engines, Norden to Loomis, and on eastward freight trains and light engines Norden to Truckee.

Sprinklers are to be kept open while train is in motion; where long stops are made they will be closed temporarily to avoid waste of water.

24. Minimum clearances for rotary plows:

Rotary snow plows 7210 and 7222 equipped with wings will not clear rock cut on No. 1 Track at MP 158.4, nor snow sheds and tunnels when wings are extended.

It will be necessary for rotary snow plows 7210 and 7222 to stop for "Leave siding signal" at west end Midas siding, and lay this signal down before passing it.

All rotaries will not properly clear ground throw switches with switch lamps and it will be necessary to remove switch lamps before passing and then replace them.

Rotary snow plows must come to a stop when a train or engine is passing on adjacent track.

Rotary snow plows equipped with wide wings must not meet or pass other rotaries so equipped, on adjacent track until it is known that proper clearance exists.

Flangers operating in snow territory must raise flanger blades and stop while train or engine is passing on adjacent track.

OPERATION OF TURNTABLES

26. Yellow light signals on leads from turn-table at Norden. These signals will indicate route to be used from turntable. If no indication visible when engine is ready to leave turn-table, telephone signal operator at Norden for instructions.

Turn-table equipped with rail locks each end. Before moving onto table from any lead table must be lined so engine will enter from locked end only. Engines when backing and approaching table from lead from eastward siding, east end, will stop to clear table and fireman after properly lining and locking table will signal engineer to move onto table by green light controlled by push button located on post of turn-table shed on engineer's side. This signal does not indicate position of turn-table or turn-table lock. Engines leaving turn-table will leave from locked end. In making movements to or from turntable it will not be necessary to lock opposite end of table.

Norden turn-table must not be moved until engineer signals fireman engine is properly spotted and brakes applied.

Marker posts are placed on each end of the Norden turntable to aid in spotting engines. AC class engines must be spotted with center of cab door directly opposite marker post to avoid couplers striking concrete piers when turning.

Enginemen must see that knuckles on both ends of engine are closed before turning engine.

Normal position turn-tables will be as follows:

Emigrant Gap....East approach, with motor on east end,
Norden...........East approach to eastward track.

Trainmen and enginemen using these turn-tables must leave them lined as shown above.

Engineer or fireman, preferably engineer, must remain in the cab of engine at all times when engines are being turned at Norden and Emigrant Gap.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
	(ROSEVILLE-SPARKS—EASTWARD)	
111.21	East of Rocklin	Antelope Creek Bridge ... Side
114.2	East of Rocklin	Tunnel No. 15 ... Side and overhead
114.7	East of Rocklin	Tunnel No. 16 ... Side and overhead
117.3	East of Lincoln Ave., Penryn	Tunnel No. 17 ... Side and overhead
120.5	East of Newcastle	Tunnel No. 18 ... Side and overhead
122.7	East of Newcastle	Tunnel No. 19 ... Side and overhead
123.1	East of Newcastle	Tunnel No. 20 ... Side and overhead
124.6	East of Nevada St., Auburn	Tunnel No. 21 ... Side and overhead
131.2	East of Bowman	Tunnel No. 22 ... Side and overhead
132.7	East of Clipper Gap	Tunnel No. 23 ... Side and overhead
132.9	East of Clipper Gap	Tunnel No. 24 ... Side and overhead
133.1	East of Clipper Gap	Tunnel No. 25 ... Side and overhead
133.3	East of Clipper Gap	Tunnel No. 26 ... Side and overhead
133.8	East of Clipper Gap	Tunnel No. 27 ... Side and overhead
134.8	East of Applegate	Tunnel No. 28 ... Side and overhead
135.9	East of Applegate	Tunnel No. 29 ... Side and overhead
138.7	East of New England Mills	Tunnel No. 30 ... Side and overhead
139.2	East of New England Mills	Tunnel No. 31 ... Side and overhead
139.4	East of New England Mills	Tunnel No. 32 ... Side and overhead
141.7	Colfax, west of station	Signal 1414 ... Side
152.2	Gold Run, East of station	Water Column ... Side
152.2	Gold Run, East of station	Oil Column ... Side
164.3	Knapp	Tunnel No. 1 ... Side and overhead
164.3	Knapp	Lower Water Column ... Side
166.6	Blue Canon, West of station	Signal 1656 ... Side
166.6	Blue Canon, East of station	Water Column ... Side
171.8	Emigrant Gap	Signal 1718 ... Side
197.0	Eder, East of Snowshed	Signal 1978 ... Side
171.43 to 201.27	Emigrant Gap to Andover	Snowsheds and signals in Snowsheds ... Side and overhead
210.60	East of Truckee	Signal Bridge 2106 ... Side
214.71	East of Truckee	Signal Bridge 2146 ... Side
216.52	Boca	Signal Bridge 2164 ... Side
218.05	Hinton	Signal Bridge 2180 ... Side
221.88	Wickes	Signal Bridge 2220 ... Side
231.50	Verdi	Signal Bridge 2316 ... Side
237.02	Lawton	Signal Bridge 2370 ... Side
238.90	East of Lawton	Signal Bridge 2390 ... Side
	(SPARKS-ROSEVILLE—WESTWARD)	
238.90	West of Reno	Signal Bridge 2389 ... Side
231.50	Verdi	Signal Bridge 2317 ... Side
218.05	Hinton	Signal Bridge 2181 ... Side
216.52	Boca	Signal Bridge 2165 ... Side
214.71	West of Boca	Signal Bridge 2147 ... Side
212.63	West of Boca	Signal Bridge 2125 ... Side
200.0	West of Tunnel 42	Signal 2002 ... Side
201.27 to 171.43	Andover to Emigrant Gap	Snowsheds and signals in Snowsheds ... Side and overhead
200.22	Andover	Tunnel No. 13 ... Side and overhead
197.0	Eder, East of Snowshed	Signal 4L ... Side
195.7	West of Donner	Tunnel No. 12 ... Side and overhead
195.4	West of Donner	Tunnel No. 11 ... Side and overhead
195.1	West of Donner	Tunnel No. 10 ... Side and overhead
194.9	West of Donner	Tunnel No. 9 ... Side and overhead
194.3	West of Donner	Tunnel No. 8 ... Side and overhead
194.1	West of Donner	Tunnel No. 7 ... Side and overhead
193.7	West of Donner	Tunnel No. 6 ... Side and overhead
181.0	West of Troy	Tunnel No. 4 ... Side and overhead
180.7	West of Troy	Tunnel No. 3 ... Side and overhead
166.0	Blue Canon, East of station	Water Column ... Side
164.3	West of Knapp	Tunnel No. 1 ... Side and overhead
158.4	West of Midas	Rock cut ... Side
152.2	Gold Run, East of station	Oil Column ... Side
141.7	Colfax, East of station	Signal 1425 ... Side
141.7	Colfax, West of station	Water Column ... Side
141.7	Colfax, West of station	Signal 1415 ... Side
122.66	West of Auburn	Rock Cut ... Side
122.52	West of Auburn	Rock Cut ... Side
122.2	West of Auburn	Bloomer Cut ... Side
122.0	West of Auburn	Rock Cut ... Side

FIRE ALARM BOX LOCATIONS KNAPP TO ANDOVER

No. Box	LOCATION	MP
7	Emigrant Gap, east end of snow shed	171.6
8	East of Signal 1725	172.5
9	At Signal 1735, east of Emigrant Gap	173.7
12	East of Emigrant Gap	174.2
13	Crystal Lake, near west switch	178.0
14	Crystal Lake, near section house	178.4
17	West end Butte Canyon Bridge	178.9
18	East end of Shed No. 10	179.1
19	Opposite section house at Cisco	180.3
21	At Signal 1841, east of Cisco	184.0
22	Troy	185.5
23	Troy, east of station	185.8
26	East end lower Cascade Bridge	186.8
27	East end upper Cascade Bridge	187.6
28	West end snow shed, west of Norden	191.8
29	No. 1 Track Norden, east of cook house	192.5
31	No. 1 Track Norden, old Summit station	193.0
32	No. 1 Track, west of Tunnel 6	193.6
33	No. 1 Track, east of Tunnel 6	194.2
34	No. 1 Track, east of Tunnel 8	194.7
35	No. 1 Track, east of Tunnel 10	195.2
36	No. 1 Track, east of Tunnel 11	195.7
37	No. 1 Track, on top of Tunnel 12	195.8
38	No. 2 Track east portal Tunnel 41	195.5
39	Snow shed Eder crossovers	197.7
42	West end of shed No. 47	198.6
43	East end of shed No. 47	199.0
44	West of Tunnel 13	200.0
46	Opposite Andover section house	200.5
49	Norden turn-table	192.1
51	No. 2 Track, east switch, run-around track	192.6
52	No. 2 Track Norden, road crossing	193.0
53	No. 2 Track Norden, east switch	193.2

Code signals following box numbers are as follows:

One: Broken rail on No. 2 Track,
Two: Broken rail on No. 1 Track,
Three: Slide on No. 2 Track,
Four: Slide on No. 1 Track,
Five: Telephone,
Six: FIRE.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10

SPECIAL INSTRUCTIONS—MOUNTAIN SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, ROSEVILLE TO SPARKS, No. 2 Track:					
MP MP					
106.66 to 108.12	40	35	25	25	15
108.12 to 113.00	70	50	35	35	20
113.00 to 141.70 (Colfax)	50	45	35	35	20
141.70 to 152.00, except:	35	35	20	30	15
On curves	32	30	20	30	15
152.00 to 153.00	35	35	30	30	15
153.00 to 170.70 (171.80) (Emig. Gap), except:	35	35	20	30	15
On curves	32	30	20	30	15
171.80 to 192.00 (Norden), except:	35	35	25	30	15
On curves	32	30	25	30	15
192.00 to 203.00, except:	35	35	20	30	15
On curves	32	30	20	30	15
Passing waiting room, Norden	10	10	10	10	10
203.00 to 204.00	35	35	20	30	15
204.00 to 207.75, except:	35	35	20	30	15
On curves	32	30	20	30	15
207.75 to 209.10	40	35	20	30	15
209.10 to 238.80	45	40	35	35	25
238.80 to 241.63	45	40	30	30	20
★241.63 to 244.00 (Reno)	20	20	20	20	15
244.00 to 245.12	45	40	20	20	20
245.12 to 247.14	20	15	15	15	15

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
WESTWARD, SPARKS TO ROSEVILLE, No. 1 Track:					
MP MP					
247.14 to 245.12	20	15	15	15	15
245.12 to 244.00	45	40	20	20	20
★244.00 to 241.63	20	20	20	20	15
241.63 to 238.80	45	40	30	30	20
238.80 to 209.10	45	40	35	35	25
209.10 to 113.26, except:	35	35	20	30	15
On curves	32	30	20	30	15
Passing waiting room, Norden	10	10	10	10	10
113.26 to 111.27	70	50	35	45	30
111.27 to 111.03 (curve)	40	35	35	35	15
111.03 to 108.12	70	50	35	45	30
108.12 to 106.66	40	40	15	15	15

★Regulated by City ordinance.

Freight train handled by DEF class engines when permitted to operate without use of retainers, may make maximum speed as follows:

Westward, MP 192.10 (Norden) to MP 169.60..........25 MPH
" MP 144.00 (Colfax) to MP 123.00..........25 MPH
Eastward, MP 192.00 (Norden) to MP 209.10..........25 MPH

Trains with flangers must not exceed 30 MPH between Lawton and Loomis.

Trains with rotary snow plows must not exceed 25 MPH between Lawton and Loomis, and when pushed by engine must not exceed 20 MPH between these points.

Fire trains, with water cars full must not exceed 25 MPH at any point, and with water cars less than three-fourths full must not exceed 20 MPH. Water cars must be kept full when possible.

RULE 10(J). Light engines may make speed shown in Speed Restrictions table in territory where such speed is in excess of that authorized by speed board.

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Roseville to Colfax via No. 2 Track	Colfax to Sparks via No. 2 Track Roseville to Colfax via No. 1 Track	Sparks to Truckee	Truckee to Summit
DEP-3	6017	2600	1380	3250	2250
DEP-4, 7	6000 to 6004 and 6018	2600	1400	3350	2300
DEP-5, 6	6005 to 6016	4400	2550	6550	3400
DEP-8	6019 to 6022	5500	3300	8150	4300
DEF-1	6122 to 6137	....	....	....	....
DEF-1, 2	6138 to 6179	8850	6200	12800	8300
DEF-3, 4, 5, 6	6180 to 6339	11000	6350	15800	8300
DERS-2, 4 to 9, 11	5203 to 5249, 5501 and 5502	2900	1800	4300	2250
DES-1 to 8	1000 to 1032	890	510	1320	680
DES-100 to 109	1300 to 1441	1370	810	2050	1060
DES-200, 201	1900 to 1903	460	270	690	360
M-4	1617 to 1713	1050	690	1650	800
M-6, 8	1721 to 1803, 1824 and 1825	1300	870	2000	1000
M-9	1804 to 1822, 1826 to 1830 and 1836	1400	930	2150	1050
M-11	1832 to 1835	1400	930	2150	1050
T-1	2248 and 2252	900	590	1400	680
T-8	2178	630	370	1000	490
T-23	2301 to 2310	1350	920	2100	1050
T-26	2296 and 2299	1150	750	1800	870
T-28, 31	2312 to 2362	1500	1000	2350	1150
T-32	2363 to 2370, 2372 to 2384	1450	970	2300	1100
T-40	2371	1450	970	2300	1100
T-37	2105 and 2106	1350	840	2100	1050
P-1, 3, 5	2404, 2408, 2411, 2412, 2417, 2428 to 2433, 2439 to 2452 and 2459	1100	700	1800	950
P-1	2403, 2405 to 2407 and 2415	1100	700	1800	950
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	1250	780	2000	1050
P-6	2453, 2454 and 2458	1450	890	2300	1150
P-7	2476 and 2477	1600	980	2500	1250
P-8, 10	2461 to 2474, 2478 to 2483	1550	990	2550	1350
P-8, 10	2475, 2484 to 2491	1550	990	2550	1350
P-11	3104 and 3109	1250	770	2000	1000
P-12	3120 to 3129	1600	1000	2600	1400
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2625 to 2860, 3440 to 3469	1700	1150	2600	1300
C-18	3400 to 3409	1550	980	2350	1250
C-19	3410 to 3426	1600	1000	2450	1300
TW-1	2900 to 2913	1250	790	1950	1000
TW-2, 3	2937 to 2952	1000	620	1550	800
TW-8	2914 to 2923	1450	970	2250	1250
A-3	3025 and 3057	920	520	1500	710
A-6	3000 and 3002	1100	650	1750	860
Mk-2, 4	3201 to 3240	1900	1250	2950	1600
Mk-5, 6	3241 to 3277	2100	1400	3250	1850
Mk-7, 8, 9	3300 to 3324	2300	1500	3500	2000
Mk-10	3295	1800	1150	2750	1450
Mk-11	3297 and 3298	1750	1100	2650	1400
F-1	3611 to 3652	2450	1650	3750	2100
F-3, 4, 5	3653 to 3769	2750	1850	4300	2400
MM-3	3930 and 3931	3100	1950	4950	2550
AC-4, 5	4100 to 4125	4450	2800	6800	3550
AC-6 to 12	3800 to 3811, 4126 to 4294	4800	2900	7300	3700
Mt-1, 3, 4, 5	4300 to 4376	2150	1400	3400	1850
Mt-2	4385 to 4390	2400	1450	3750	1900
GS-1, 2	4401 to 4415	2250	1450	3600	1950
GS-3, 4, 5, 6	4416 to 4469	2350	1550	3700	2050
SP-1, 2, 3	5000 to 5048	3250	2050	5050	2650

In figuring tonnage of train add 3 Ms for each empty or underloaded car of 55 Ms or less, except from Sparks to Truckee add 6 Ms for each such car of less than 45 Ms, add 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—EAST VALLEY SUBDIVISION

RULE 10 (J). Speed boards placed to the left of track in current of traffic direction but with one track intervening:

Eastward at MP 104.37 Roseville bears figures 20-15.

Speed board placed to right of track but with one track intervening:

Westward at MP 144.63 Berg, bears the figures 50-35.

RULE 14(d). As specified below, — — — — o, will be indication that flagman may return from west as prescribed by Rule 99:

Tehama on Davis line.

RULE 14(e). As specified below, — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Roseville on Tehama line,
Berg on Yuba City Branch.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
102.04	Roseville (Eastward and No. 2 Track)	110.87
102.04	“ (No. 1 and Westward Track)	110.87
	“ (Tehama line)	107.71
138.75	Marysville	143.94
	“ (Oroville Branch)	124.44
	“ (Dantoni Branch)	144.25
182.61	Chico	185.36
	“ (Stirling City Branch)	187.06
146.40	Oroville	147.95
146.78	Yuba City	148.24

Yard limit boards located to left of track:

Eastward approaching Gerber.

Roseville: Eastward first-class trains to Tehama line must make station stop with rear end clear of west drill track.

Westward trains except first-class, from Tehama line must not pass Signal 1065 unless proceed signal received from yardman.

Westward trains finding Signal 1065 displaying stop indication must stop, and may then proceed with caution if proceed signal received from yardman.

Westward trains except first-class, moving on westward main track, or on west drill or west yard tracks, must not pass fouling point of switch to westward main track just east of scale house (east of subway) unless proceed signal received from yardman.

Eastward trains finding Signal 1064 displaying stop indication must stop, and may proceed only when proceed signal received from yardman. Upper unit governs movement on No. 2 Track; lower unit governs movement to Tehama line.

RULE 98: Railroad crossings at grade not interlocked:

Roseville: Eastward main track of Tehama line crosses No. 1 Track of Sparks line and west drill track at passenger station. Trains or engines moving in either direction on west drill track or against current of traffic on No. 1 Track may move over this crossing without stopping, provided crossing is seen to be clear and no train or engine approaching on intersecting line, and proceed signal is received from yardman.

Yuba City: SNRy at Bridge St., and at B St.—Stop within 200 feet of crossings.

MP 186.6 on Stirling City Branch: SNRy crossing—Stop within 200 feet of crossing.

RULE 99. Roseville. Westward trains except first-class, having received proceed signal from yardman to pass Signal 1065 or 1067 to move on westward main track, and rear of train having passed either of these signals, need not provide flag protection to the rear if stopped or delayed, until rear end passes subway. Protection between these points will be the responsibility of yardmaster or his representative. Protection east of these signals, and beyond subway must be provided by train or engine crew.

RULE 103 (A). Trains and engines must stop and be preceded by flagman before crossing highways at:

Clayton, on both spurs,
Marysville, Fourth St. crossing on Old Cannery track,
Wilson, at Wilson road crossing.

RULE 104. The normal position of rigid switches at junctions:

Dantoni Jct.	Dantoni Branch, for Tehama line,
Berg	Yuba City Branch, for siding,
Chico	Stirling City Branch, for yard Track No. 1.

RULE 510. The following block signals, equipped with triangular plate displaying the letter “P”, have included in their control limits some special protective device.

Eastward	Protection	Westward
P-1068 P-1070	Spring switch, end double track MP 106.88	P-1069
P-1082	Collision detector, highway underpass, MP 108.22	P-1089
P-1344	High water detector, bridge 135.80	P-1371
P-1406	Spring switch west end siding Marysville	
P-1906	High water detector, bridge 191.83	P-1927
P-2104	Collision detector, county road underpass, MP 210.7	P-2111

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Marysville	West end siding	Main track

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Roseville	End double track, Tehama line	Westward track
Stirling City	50 feet west of baloon track switch	For eastward movement

Main track switch 50 feet east of spring derail at Stirling City must be left lined and locked for movement into balloon track.

RULE 605. INTERLOCKING

Binney Jct. Tower: Limits extend from fouling point east end siding Marysville to westward interlocking signal opposite Signal 1446 at Berg.

Trains from Yuba City Branch must obtain permission from signal operator Binney Jct., before fouling Berg siding.

Westward trains on siding Berg must obtain permission from signal operator Binney Jct., before fouling main track, and will then enter interlocking limits when signal just west of siding switch displays proper indication for movement.

Telephone located at west end Berg siding.

Whistle signals:

Main track to or from Tehama, — o o o o,
Siding to or from Tehama, o — — —,
Siding to or from Oroville, — — — o,
Siding to or from west leg of wye, o o o — —,
Main track to or from west leg of wye, — — o o o,
Main track to or from east leg of wye, o —.

Tehama-Gerber: Interlocking limits on main track extend from signal 398 feet west of Tehama junction switch on Davis line and signal 293 feet west of Tehama junction switch on Roseville line to signal 48 feet west of west switch No. 1 track Gerber yard. Interlocking limits on siding extend from west switch to dwarf semi-automatic signal 295 feet east of west switch Gerber siding.

Top unit of signal on Roseville line 293 feet west of Tehama junction switch governs movement on main track. Lower unit governs movement to Gerber siding.

Top unit of semi-automatic signal at west end siding Gerber governs movement to Davis line; lower unit governs movement to Roseville line.

East switch of crossover between main track and Gerber siding is equipped with an electric lock. Permission to move from siding to main track through this crossover must be obtained from the operator. The electric lock on the east switch must first be operated in accordance with instructions posted inside of door of electric lock located at switch, after which manually line the east switch and then line the west switch.

Trains using crossover from main track to siding must first manually line west crossover switch, then operate electric lock in accordance with instructions posted inside door of electric lock located at the east crossover switch after which manually line the switch.

Trains authorized to enter Gerber siding through crossover must have engine east of interlocking signal before electric lock can be operated.

AUTOMATIC INTERLOCKING

Live Oak: Crossing SNRy one-half mile east of Live Oak.

Trains must not exceed 30 MPH between home signal and crossing.

When trains are stopped by signals governing the use of automatic interlockings, flagman must be sent to crossing to operate clock-work time release. Release must not be operated when trains are between home signals or seen approaching on intersecting line.

After release has been operated, a red indicator light should be displayed over release and home signal should indicate proceed or red indicator on home signal must be displayed. Trains may then proceed.

If red indicator lights are not displayed, trains may proceed over crossing as provided by Rule 663.

Instructions for operating time release are posted on door of box.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as follows
M	1432	Berg	Proceed to east end siding.
S	1432	Berg	Enter siding.
M	1467	Berg	Proceed to interlocking limits west of Berg.
S	1467	Berg	Enter siding.

GENERAL REGULATIONS

RULE 825. Track between station and Stirling City Branch main track at Chico must be kept clear of cars.

RULE 827. Freight trains, and light engines not equipped with tire coolers, on descending grade, will stop between switches, as indicated, at the following stations for heat radiation, at which time train inspection will be made and enginemen will inspect engines:

Westward on Stirling City Branch:

Doon	10 mins.
Paradise	10 mins.
MP 192.6	5 mins.

RULE 829. Westward freight trains stopping at Chico to perform switching or to take water, must stop east of Sacramento Ave., or cut train at that point to permit the passage of traffic over tracks.

RULE 836. Cars must not be handled ahead of engine at any point between Stirling City and Chico on westward trip.

AIR BRAKE RULES

RULE 17. Retainers must be used on freight and mixed trains on descending grades as follows:

Stirling City to MP 186: One valve for every 80 Ms in train.

FREIGHT TRAINS

RULE 22. Hand brakes on outgoing trains at Roseville must not be released until engine is coupled to train or yard air is through train.

RULE 25. Rear end test on freight trains must be made immediately prior to leaving Stirling City on westward trains.

RULE 33. Gross tonnage of any freight train must not exceed 80 Ms per operative brake Stirling City to Chico.

MISCELLANEOUS

1. In valley territory engines may take oil and water without cutting off from train at any point except westward freight trains at Marysville.

After taking water at water columns at Marysville or Chico, spout must be left cleared, and spout of eastward column pointing east, and spout of westward column pointing west.

4. Helper service:

Two engines must not be coupled on Stirling City Branch. Helper engine must be cut back in train.

10. Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
F, AC, Mk, Mt, GS	Chico	Priol warehouse spur; Reynolds warehouse spur; No. 3 and No. 4 tracks.
"	Marysville	Strain warehouse—9th and B Sts.—(Engines must not enter warehouse).
F, AC	Clayton	Stockton Fire Brick spur across highway.
Engines heavier than 210,000 pounds on drivers	Marysville	Old Cannery spur.
"	Lincoln	Grain Growers elevator track.
Engines heavier than 200,000 pounds on drivers	Lincoln	Gladding McBean tracks.
All engines	Chico	Diamond Match Co. track at wye.
Engines heavier than C class	Marysville	Within yard limits on Oroville line beyond Valley Meat corral track.
"	Biggs	Rosenburg spur.
All engines	Dantoni	Industry track beyond 700 feet east of east switch of siding.
"	Oswald	Back track, beyond three carlengths from west end, and beyond road crossing from east end.
"	Tehama	Spur east of slough bridge at 5th St. Engines must not go beyond 250 feet from fouling point.

Load limit (car and contents):

Roseville-Tehama	251,000 pounds
Chico-Stirling City	210,000 pounds
Berg-Wilson	210,000 pounds
Dantoni Jct.-Dantoni	210,000 pounds
Binney Jct.-Oroville	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

14. From May 1 to Nov. 1, sprinklers will be placed in service on westward freight trains and light engines Stirling City to Butte Creek bridge.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description	
147.6	Yuba City	SNRy trolley wire, Bridge St.	Overhead
147.6	Yuba City	SNRy trolley wire, "B" St.	Overhead
156.6	Tudor	Water Tank	Side

SPECIAL INSTRUCTIONS—EAST VALLEY SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, ROSEVILLE TO TEHAMA:				
MP MP				
106.60 (106.58) to 106.85 (end double track)	15	15	15	15
106.85 to 126.88	60	50	50	30
126.88 to 126.96 (Bear River bridge) except:	60	50	50	30
with GS, AC, or F class engines	25	25	25	25
126.96 to 139.80	60	50	50	30
139.80 to 142.44	25	25	25	25
142.44 to 143.88	50	35	35	30
143.88 to 152.30	60	50	50	30
152.30 to 152.31 (SNRy. crossing)	30	30	30	30
152.31 to 162.00	60	50	50	30
162.00 to 182.75	50	35	35	30
182.75 to 185.08 (Chico)	25	25	25	20
185.08 to 192.00	50	35	35	30
192.00 to 198.96	60	50	50	30
198.96 to 203.67	60	40	40	30
203.67 to 203.69 (Deer Creek bridge) except:	60	40	40	30
with GS, AC, or F class engines	25	25	25	25
203.69 to 209.93	60	40	40	30
209.93 to 210.82 (curve)	35	35	35	30
210.82 to 210.97 (Sacramernto River bridge) except:	35	35	35	30
with GS, AC, or F class engines	25	25	25	25
210.97 to 211.85 (curves)	35	35	35	30
211.85 to 211.87 (junction switch)	25	25	25	20
EASTWARD, CHICO TO STIRLING CITY:				
184.28 to 188.75	20	20	20	20
188.75 to 215.46	12	12	12	12
EASTWARD, DANTONI JCT. TO DANTONI	20	20	20	15
EASTWARD, BINNEY JCT. TO OROVILLE:	20	20	20	15
EASTWARD, BERG TO WILSON:				
★144.43 to 148.80	15	15	15	15
148.80 to 159.24	25	25	25	20

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	1	2	3	4
WESTWARD, TEHAMA TO ROSEVILLE:				
MP MP				
211.87 to 211.85 (junction switch)	25	25	25	20
211.85 to 210.97 (curves)	35	35	35	30
210.97 to 210.82 (Sacramento River bridge) except:	35	35	35	30
with GS, AC, or F class engines	25	25	25	25
210.82 to 209.93 (curves)	35	35	35	30
209.93 to 203.69	60	40	40	30
203.69 to 203.67 (Deer Creek bridge) except:	60	40	40	30
with GS, AC, or F class engines	25	25	25	25
203.67 to 198.96	60	40	40	30
198.96 to 192.00	60	50	50	30
192.00 to 185.08	50	35	35	30
185.08 to 182.75 (Chico)	25	25	25	20
182.75 to 162.00	50	35	35	30
162.00 to 152.31	60	50	50	30
152.31 to 152.30 (SNRy. crossing)	30	30	30	30
152.30 to 143.88	60	50	50	30
143.88 to 142.44	50	35	35	30
142.44 to 139.80	25	25	25	25
139.80 to 126.96	60	50	50	30
126.96 to 126.88 (Bear River bridge) except:	60	50	50	30
with GS, AC, or F class engines	25	25	25	25
126.88 to 106.85	60	50	50	30
106.85 to 106.58 (106.60)	15	15	15	15
WESTWARD, STIRLING CITY TO CHICO:				
215.46 to 188.75	12	12	12	12
188.75 to 184.28	20	20	20	20
WESTWARD, DANTONI TO DANTONI JCT.	20	20	20	15
WESTWARD, OROVILLE TO BINNEY JCT.	20	20	20	15
WESTWARD, WILSON TO BERG:				
159.24 to 148.80	25	25	25	20
★148.80 to 144.43	15	15	15	15

★Regulated by City ordinance.

♦RESTRICTED CARS are listed on page 6 under "Maximum Speed Permitted with Certain Equipment", and trains handling must not exceed maximum speed of 40 MPH.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Roseville and Gerber	Chico to Stirling City	Stirling City to Chico	Wilson and Berg	Dantoni Jct. and Dantoni	Binney Jct. and Oroville
DEP-3	6017	7500		....	....	....	....
DEP-4, 7	6000 to 6004 and 6018	7500	....	....	....	....	....
DEP-5, 6	6005 to 6016	13700		....	....	....	....
DEP-8	6019 to 6022	18500	....	....	....	....	....
DEF-1	6122 to 6137	....	....		....	....	....
DEF-1, 2	6138 to 6179	20000	....	....	....	....	....
DEF-3, 4, 5, 6	6180 to 6339	20000	....	....	....	....	....
DERS-2, 4 to 9, 11	5203 to 5249, 5501 and 5502	10000	....	....	....	....	....
DES-1 to 8	1000 to 1032	3200	290	560	2400	2400	2400
DES-100 to 109	1300 to 1441	4800	550	980	4000	4000	4000
DES-200, 201	1900 to 1903	1550	200	300	1240	1240	1240
M-4	1617 to 1713	4300	430	830	3400	3400	3400
M-6, 8	1721 to 1803, 1824 and 1825	5250	530	980	4150	4150	4150
M-9	1804 to 1822, 1826 to 1830 and 1836	5550	540	1020	4400	4400	4400
M-11	1832 to 1835	5550	570	1070	4400	4400	4400
T-1	2248 and 2252	3850	340	670	3100	3100	3100
T-8	2178	2750	250	500	2100	2100	2100
T-23	2301 to 2310	5550	550	1000	4400	4400	4400
T-26	2296 and 2299	4800	410	820	3900	3900	3900
T-28, 31	2312 to 2362	6050	600	1100	4800	4800	4800
T-32	2363 to 2370, 2372 to 2384	6150	645	1150	5050	5050	5050
T-40	2371	6150	....	....	....	5050	
T-37	2105 and 2106	5450	510	980	4250	4250	4250
P-1, 3, 5	2404, 2408, 2411, 2412, 2417, 2428 to 2433, 2439 to 2452 and 2459	4850	....	....	3800	3800	....
P-1	2403, 2405 to 2407 and 2415	4850	....	....	3800	3800	
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5350	....	....	4150	4150	
P-6	2453, 2454 and 2458	6100		....	4750	4750	....
P-7	2476 and 2477	6500		....	5050	5050	
P-8, 10	2461 to 2474, 2478 to 2483	6750		....	....	5250	
P-8, 10	2475, 2484 to 2491	6750		....	....	5250	
P-11	3104 and 3109	5300		....	4100	4100	
P-12	3120 to 3129	7000	....			5350	
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2625 to 2860, 3440 to 3469	6650	700	1250	5200	5200	
C-18	3400 to 3409	6050	640	1170	4900	....	4900
C-19	3410 to 3426	6300	....	....	....	....	....
TW-1	2900 to 2913	5050	510	950	3950	3950	3950
TW-2, 3	2937 to 2952	4050	400	750	3150	3150	3150
TW-8	2914 to 2923	5750	600	1110	4600	4600	4600
A-3	3025 and 3057	3800	....	....	....	....	....
A-6	3000 and 3002	4750	....	....	....	....	....
Mk-2, 4	3201 to 3240	7650	....	....	....	....	....
Mk-5, 6	3241 to 3277	8400	....	....	....	....	....
Mk-7, 8, 9	3300 to 3324	9200	....	....	....	....	....
Mk-10	3295	7100	....	....	....	....	....
Mk-11	3297 and 3298	6800	....	....	....	....	....
F-1	3611 to 3652	9650	....	....	....	....	....
F-3, 4, 5	3653 to 3769	11450	....	....	....	....	....
MM-3	3930 and 3931	12700	....	....	....	....	....
AC-4, 5	4100 to 4125	17300	....	....	....	....	....
AC-6 to 12	3800 to 3811, 4126 to 4294	18500	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	8950	....	....	....	....	....
Mt-2	4385 to 4390	9750	....	....	....	....	....
GS-1, 2	4401 to 4415	9550	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469	9900	....	....	....	....	....
SP-1, 2, 3	5000 to 5048	12950	....	....	....	....	....

In figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms; except from Chico to Stirling City add 3 Ms for each such car of 55 Ms or less.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 10 (J). Round yellow speed boards indicate the speed restrictions applying to Streamliners SHASTA DAYLIGHT and CASCADE with DEP class engine only.

Speed board placed to the right of track but with one track intervening:

Eastward at MP 212.75 Gerber bears the figure 35.

RULE 14(d). As specified below, — — — o, will be indication that flagman may return from west as prescribed by Rule 99.

Tehama on Davis line.

RULE 14(e). As specified below, — — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Davis on Gerber line,
Woodland on Knights Landing Branch,
Harrington on Colusa Branch.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
74.20	Davis (Dixon line)	77.37
	" (Tehama line)	77.39
83.66	Woodland	85.82
	" (Knights Landing Branch)	88.08
106.80	Harrington	110.10
	" (Colusa Branch)	110.00
147.96	Willows	150.84
	" (Fruto Branch)	151.82
164.48	Orland	167.72
177.62	" (Colusa Branch)	
211.92	Gerber	216.08
120.00	Grimes	122.00
169.00	Hamilton	171.00

Yard limit boards located to left of track:

Eastward approaching Gerber.

Gerber: Westward freight trains and light engines must not pass east switch of yard track No. 1 unless proceed signal received from yardman.

Eastward trains except first-class must not pass crossover just west of Signal 2136 unless proceed signal received from yardman.

RULE 98. Drawbridges not interlocked:

Drawbridge 94.14, Knights Landing Branch: Over Sacramento River—Stop within 200 feet of drawbridge.

RULE 103 (A). Trains and engines must stop and be preceded by flagman before crossing highway at:

Woodland, Main St. crossing on house track.

RULE 104. The normal position of rigid switches at junctions:

Woodland	Knights Landing Branch, for movement from siding through crossover to Tehama line,
Harrington	Colusa Branch, for siding,
Willows	Fruto Branch, for Gerber line,
Wyo	Colusa Branch, for Gerber line,
Marchant	Ensley Branch, for Knights Landing Branch.

RULE 505. AUTOMATIC BLOCK SYSTEM

Gerber: Yellow aspect in diverging route unit on Signal 2134 governs movement through crossover 1300 feet beyond signal.

RULE 510. The following block signals, equipped with triangular plate displaying the letter "P", have included in their control limits some special protective device.

Eastward	Protection	Westward
P-1178	High water detector, bridge 118.88	P-1201
P-1354	High water detector, bridge 137.44	P-1381
P-1756	High water detector, bridge 176.21	P-1781

RULE 516. Overlap posts:

Westward Trains: Wyo—1000 feet west of east switch of siding.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Gerber	East end siding	Main track

Spring switch east end siding Gerber equipped with electric switch lamp. If green light is not displayed, trains must stop and examine switch and it must be known that it is safe for passage of train before passing over it; and when trailing movement is to be made from siding, switch must be hand-thrown before and after the movement is made.

Spring switches not equipped with facing point locks are located on various roundhouse leads at Gerber.

RULE 605. INTERLOCKING

Davis: Within Davis interlocking limits trains may occupy main track without rear end protection, except that flagman must take position not less than thirty feet behind a train carrying passengers. Signal operator must not authorize a train to pass an interlocking signal displaying stop indication until he has assured himself that conductor and engineer of all trains involved are fully acquainted with intended move so that proper protection will be provided.

Woodland: SNRy crossing.

Whistle signals:

Siding through crossover to or from Tehama line, — o o o o,
House track to or from Tehama line, — — — o.

Hand signals as required by Rule 628 may be given from the tower instead of from the ground.

Towerman not on duty Saturdays, Sundays and holidays, nor between 5:00 PM and 8:00 AM on other days. Signals on SNRy will be placed at "stop" position and signals on SP will be in "clear" position for eastward and westward movements.

Tehama-Gerber: Interlocking limits on main track extend from signal 398 feet west of Tehama junction switch on Davis line and signal 293 feet west of Tehama junction switch on Roseville line to signal 48 feet west of west switch No. 1 Track Gerber yard. Interlocking limits on siding extend from west switch to dwarf semi-automatic signal 295 feet east of west switch Gerber siding.

Top unit of signal on Roseville line 293 feet west of Tehama junction switch governs movement on main track. Lower unit governs movement to Gerber siding.

Top unit of semi-automatic signal at west end siding Gerber governs movement to Davis line; lower unit governs movement to Roseville line.

East switch of crossover between main track and Gerber siding is equipped with an electric lock. Permission to move from siding to main track through this crossover must be obtained from the operator. The electric lock must first be operated in accordance with instructions posted inside of the lock box door, after which manually line the east switch and then line the west switch

Trains using crossover from main track to siding must first manually line west crossover switch, then open and operate electric lock, after which manually line the switch.

Trains authorized to enter Gerber siding through crossover must have engine east of interlocking signal before electric lock can be operated.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows:
		East end siding	
M	7-ft. mast	Gerber	Enter main track and proceed to crossover just west of Signal 2136 to enter yard.
M	2134	Gerber	If passenger train, proceed to train-order office. If freight train, proceed to crossover to enter yard.

These indicators do not apply to trains entering yard at west switch No. 1 Track.

If "M" is not illuminated train must stop and call operator for instructions.

GENERAL REGULATIONS

RULE 827. At Gerber, forward brakeman of Streamliners SHASTA DAYLIGHT and CASCADE will take position on station side where rear of train will stop and make rolling inspection of train, then walk length of train on opposite side making standing inspection, giving careful attention to running gear and journal boxes, and entrain on station side.

AIR BRAKE RULES

RULE 3. Brake pipe pressure on Streamliners SHASTA DAYLIGHT and CASCADE is 110-pounds. When necessary to use steam engine to handle train, such engine must carry 110 pounds brake pipe pressure. High pressure side of air compressor governor of steam engine must be set for 140-pounds and low pressure side for 130-pounds.

FREIGHT TRAINS

RULE 22. Gerber: Trainmen must not couple air hose on outgoing trains until train is made up and engine and caboose on train.

PASSENGER TRAINS

RULE 37. Gerber: Trainmen must not couple steam and air hose on outgoing trains until train is made up.

RULE 38. Rear end air test need not be made at Gerber if continuity of brake pipe is not disturbed. Incoming engineer will apply brakes when train is stopped. Outgoing engineer will release them. Running test in accordance with Rule 39 must be made immediately after leaving terminal.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
165.4	Orland	Water Tank Spout... Overhead and side

MISCELLANEOUS

1. Take water only in emergency at: Woodland.

Engines may take oil and water without cutting off from train at any point.

After taking water at water columns at Willows and Gerber spout must be left cleared, and spout of eastward column pointing east, and spout of westward column pointing west.

10. Engines listed must not operate on tracks shown below:

Class of Engine		Restricted Tracks
F, AC, Mk, Mt, GS	Merritt	Ellison spur.
F, GS	Woodland	Swanston spur.
F, AC, Mk, Mt, GS	Dunnigan	Standard Oil spur.
"	Riz	Warehouse spur.
"	Willows	Union Oil spur; Union Ice spur.
"	Orland	Standard Oil spur; Union Oil spur.
"	Corning	Heinz spur.
AC	Tehama	House track.
All engines	Sugarfield	Must not operate on Track 5 beyond 50 feet west of west end of beet dump pit.
"	Wyo	Stoney Creek gravel pit—Engines must not go beyond gravel bin more than three car lengths. Any class engine may use either leg of wye at Wyo and on Colusa Branch between Wyo and east switch Cory.

Underground gasoline tanks installed opposite house track at a point 300 feet west of station Colusa. Engines must not be stopped in front of unloading spot when oil or gasoline cars are being unloaded.

Load limit (car and contents):

Davis-Gerber	251,000 pounds
Willows-Fruto	136,000 pounds
Woodland-Josephine	210,000 pounds
Harrington-Wyo via Colusa	210,000 pounds
Marchant-Ensley	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

SPECIAL INSTRUCTIONS—WEST VALLEY SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in SPEED RESTRICTIONS FOR ENGINES appearing on page 6 of Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	Streamliners SHASTA DAYLIGHT CASCADE	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, DAVIS TO GERBER:					
MP MP					
75.60 to 76.00	40	40	30	30	20
76.00 to 81.80	79	70	50	50	30
81.80 to 82.20 (curves)	70	65	50	50	20
82.20 to 85.03	79	70	50	50	30
85.03 to 85.13 (Woodland)	12	12	12	12	12
85.13 to 86.02 (curve)	65	60	50	50	30
86.02 to 149.50	79	70	50	50	30
149.50 to 150.00 (Willows)	40	40	40	40	20
150.00 to 165.50	79	70	50	50	30
165.50 to 165.70 (Orland)	40	40	40	40	20
165.70 to 178.00	79	70	50	50	30
178.00 to 178.90 (Corning)	40	40	40	40	20
178.90 to 185.90	79	70	50	50	30
185.90 to 186.51 (211.87) (curve)	45	45	45	45	30
211.87 to 213.50	60	60	50	50	30
213.50 to 213.80	35	35	35	35	30
EASTWARD, WILLOWS TO FRUTO:					
149.91 to 155.35	..	15	15	15	15
155.35 to 167.11	..	12	12	12	12
EASTWARD, HARRINGTON TO WYO, VIA COLUSA:					
108.80 to 120.70	..	25	25	25	20
120.70 to 121.30	..	15	15	15	15
121.30 to 180.46 (166.93)	..	25	25	25	20
EASTWARD, WOODLAND TO JOSEPHINE:					
85.56 to 96.50	..	25	25	25	20
96.50 to 117.42	..	20	20	20	15
EASTWARD, MARCHANT TO ENSLEY	..	15	15	15	15

TERRITORY	Streamliners SHASTA DAYLIGHT CASCADE	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	A	1	2	3	4
WESTWARD, GERBER TO DAVIS:					
MP MP					
213.80 to 213.50	35	35	35	35	30
213.50 to 211.87 (186.51)	60	60	50	50	30
186.51 to 185.90 (curve)	45	45	45	45	30
185.90 to 178.90	79	70	50	50	30
178.90 to 178.00 (Corning)	40	40	40	40	20
178.00 to 165.70	79	70	50	50	30
165.70 to 165.50 (Orland)	40	40	40	40	20
165.50 to 150.00	79	70	50	50	30
150.00 to 149.50 (Willows)	40	40	40	40	20
149.50 to 86.02	79	70	50	50	30
86.02 to 85.13 (curve)	65	60	50	50	30
85.13 to 85.03 (Woodland)	12	12	12	12	12
85.03 to 82.20	79	70	50	50	30
82.20 to 81.80 (curves)	70	65	50	50	20
81.80 to 76.00	79	70	50	50	30
76.00 to 75.60	40	40	30	30	20
WESTWARD, FRUTO TO WILLOWS:					
167.11 to 155.35	..	12	12	12	12
155.35 to 149.91	..	15	15	15	15
WESTWARD, WYO TO HARRINGTON, VIA COLUSA:					
166.93 (180.46) to 121.30	..	25	25	25	20
121.30 to 120.70	..	15	15	15	15
120.70 to 108.80	..	25	25	25	20
WESTWARD, JOSEPHINE TO WOODLAND:					
117.42 to 96.50	..	20	20	20	15
96.50 to 85.56	..	25	25	25	20
WESTWARD, ENSLEY TO MARCHANT	..	15	15	15	15

Streamliners SHASTA DAYLIGHT and CASCADE when handled by steam power and consisting of streamlined equipment, may run not to exceed 75 MPH on TANGENT TRACK where 70 MPH is authorized in Column 1.

♦RESTRICTED CARS are listed on page 6 under "Maximum Speed Permitted with Certain Equipment", and trains handling must not exceed maximum speed of 40 MPH.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
On gravel pit tracks—Cory	10

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Davis and Gerber	Woodland and Josephine Marchant and Ensley	Willows and Fruto	Harrington and Wyvia via Colusa
DEP-3	6017	7500	....	....	....
DEP-4, 7	6000 to 6004 and 6018	7500	....	....	....
DEP-5, 6	6005 to 6016	11700	....	....	....
DEP-8	6019 to 6022	14900	....	....	....
DEF-1	6122 to 6137	....	....	....	....
DEF-1, 2	6138 to 6179	20000	....	....	....
DEF-3, 4, 5, 6	6180 to 6339	20000	....	....	....
DERS-2, 4 to 9, 11	5203 to 5249	7850	....	....	....
DES-1 to 8	1000 to 1032	2350	2400	....	2750
DES-100 to 109	1300 to 1441	3550	4000	....	4550
DES-200, 201	1900 to 1903	1240	1240	1240	1410
M-4	1617 to 1713	3400	3400	3400	3400
M-6, 8	1721 to 1803, 1824 and 1825	4150	4150	....	4150
M-9	1804 to 1822, 1826 to 1830 and 1836	4400	4400	....	4400
M-11	1832 to 1835	4400	4400	....	4400
T-1	2248 and 2252	3100	3100	3100	3100
T-8	2178	2100	2100	2100	2100
T-23	2301 to 2310	4400	4400	....	4400
T-26	2296 and 2299	3900	3900	....	3900
T-28, 31	2312 to 2362	4800	4800	....	4800
T-32	2363 to 2370, 2372 to 2384	5050	5050	....	....
T-40	2371	5050	....	....	....
T-37	2105 and 2106	4250	4250	....	4250
P-1, 3, 5	2404, 2408, 2411, 2412, 2417, 2428 to 2433, 2439 to 2452 and 2459	3800	....	....	....
P-1	2403, 2405 to 2407 and 2415	3800	....	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	4150	....	....	....
P-6	2453, 2454 and 2458	4750	....	....	....
P-7	2476 and 2477	5050	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	5250	....	....	....
P-8, 10	2475, 2484 to 2491	5250	....	....	....
P-11	3104 and 3109	4100	....	....	....
P-12	3120 to 3129	5350	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2625 to 2860, 3440 to 3469	5200	5200	....	6050
C-18	3400 to 3409	4750	4900	....	....
C-19	3410 to 3426	4950	5100	....	5800
TW-1	2900 to 2913	3950	3950	....	3950
TW-2, 3	2937 to 2952	3150	3150	....	3150
TW-8	2914 to 2923	4600	4600	....	5300
A-3	3025 and 3057	2950	2950	....	....
A-6	3000 and 3002	3700	3700	....	....
Mk-2, 4	3201 to 3240	5950	....	....	....
Mk-5, 6	3241 to 3277	6600	....	....	....
Mk-7, 8, 9	3300 to 3324	7200	....	....	....
Mk-10	3295	5550	....	....	....
Mk-11	3297 and 3298	5300	....	....	....
F-1	3611 to 3652	7550	....	....	....
F-3, 4, 5	3653 to 3769	8950	....	....	....
MM-3	3930 and 3931	10050	....	....	....
AC-4, 5	4100 to 4125	13550	....	....	....
AC-6 to 12	3800 to 3811, 4126 to 4294	14500	....	....	....
Mt-1, 3, 4, 5	4300 to 4376	6950	....	....	....
Mt-2	4385 to 4390	7600	....	....	....
GS-1, 2	4401 to 4415	7450	....	....	....
GS-3, 4, 5, 6	4416 to 4469	7700	....	....	....
SP-1, 2, 3	5000 to 5048	10150	....	....	....

In figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

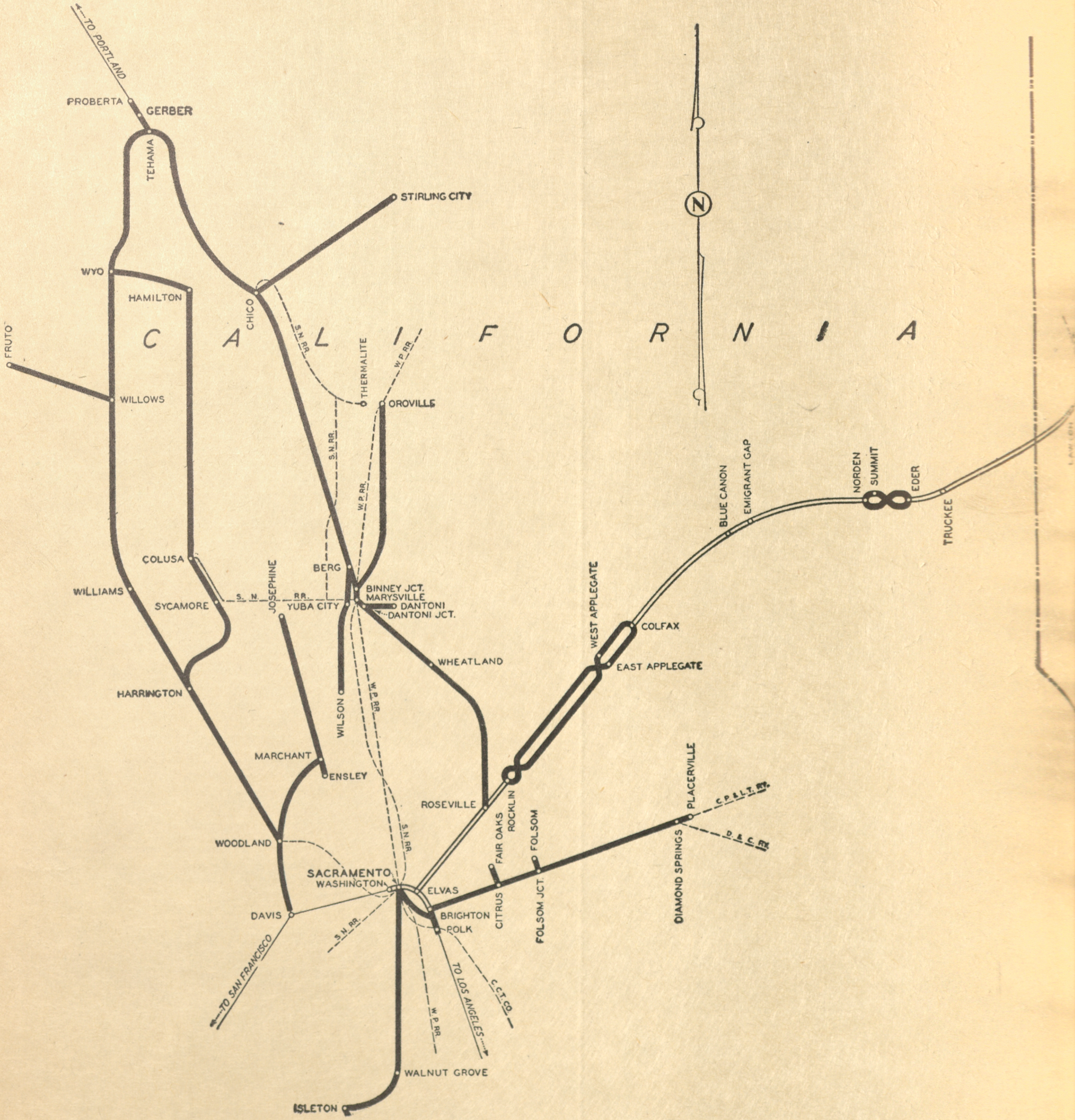
MILEAGE

n Line		First Track	Addn'l Track	Miles
n Div. to Sacramento	S. P. R. R.	.86	.86	
to Lawton	C. P. Ry.	147.75	149.29	
Vest Wye	C. P. Ry.	.31	.31	
s	C. P. Ry.	4.63	3.00	
hama	S. P. R. R.	109.71		
Proberta	C. P. Ry.	109.50	.27	
TAL		372.76	153.73	526.49

ranches		First Track	Addn'l Track	Miles
rrington to Wyo	S. P. R. R.	71.66		
antoni Jct. to Dantoni	C. P. Ry	4.46		
Citrus to Fair Oaks	S. P. R. R.	2.11		
lsom Jct. to Folsom	S. P. R. R.	1.00		
ows to Fruto	S. P R. R.	17.20		
ding—Woodland to West of Cunard	S. P. R. R.	9.71		
Cunard to Josephine	S. P. Co.	22.16		
nney Jct. to Beg. S. P. R. R.	C. P. Ry	.04		
P. R. R. to Oroville	S. P. R. R.	25.27		
Brighton to Beg. S. P. R. R.	C. P. Ry.	.07		
P. R. R. to Placerville	S. P. R. R.	54.92		
—At Brighton (Link Trk)	C. P. Ry	.32		
n to "Q" St. Sacramento	S. P. R. R.	4.94		
—Chico to Stirling City	C. P. Ry	31.24		
rchant to Ensley	S. P. Co.	1.12		
ve—Sacramento to Front and reets	C. P. Ry	.29		
to "N" St.	S. P. R. R.	.25		
to Isleton	C. P. Ry	32.94		
Berg to Wilson	S. P. R. R.	14.68		
TAL BRANCHES				294.38
TAL SACRAMENTO DIVISION				820.87

SPEED TABLE

TIME PER MILE	MILES PER HOUR
36″	100
37″	97.3
38″	94.7
39″	92.3
40″	90
41″	87.8
42″	85.7
43″	83.7
44″	81.8
45″	80
46″	78.3
47″	76.6
48″	75
49″	73.5
50″	72
51″	70.6
52″	69.2
53″	67.9
54″	66.7
55″	65.5
56″	64.3
57″	63.2
58″	62.1
59″	61
1′00″	60
1′01″	59
1′02″	58.1
1′03″	57.1
1′04″	56.2
1′05″	55.4
1′06″	54.5
1′07″	53.7
1′08″	52.9
1′09″	52.2
1′10″	51.4
1′11″	50.7
1′12″	50
1′13″	49.3
1′14″	48.6
1′15″	48
1′16″	47.4
1′17″	46.8
1′18″	46.2
1′19″	45.6
1′20″	45
1′25″	42.4
1′30″	40
1′35″	37.9
1′40″	36
1′45″	34.3
1′50″	32.7
1′55″	31.3
2′00″	30
2′15″	26.7
2′30″	24
2′45″	21.8
3′00″	20
3′30″	17.1
4′00″	15
5′00″	12
6′00″	10
7′00″	8.6
7′30″	8
8′00″	7.5
10′00″	6


TO PORTLAND
PROBERTA
GERBER
TEHAMA
STIRLING CITY
WYO
HAMILTON
CHICO
C A L I F O R N I A
FRUTO
WILLOWS
S.N.RR.
THERMALITE
W.P.RR.
OROVILLE
S.N.RR.
W.P.RR.
COLUSA
BERG
JOSEPHINE
WILLIAMS
SYCAMORE
S. N. RR.
YUBA CITY
BINNEY JCT.
MARYSVILLE
DANTONI
DANTONI JCT.
WHEATLAND
HARRINGTON
WILSON
W.P.RR.
MARCHANT
ENSLEY
ROSEVILLE
ROCKLIN
WOODLAND
S.N.RR.
SACRAMENTO
WASHINGTON
ELVAS
DAVIS
BRIGHTON
POLK
S.N.RR.
TO SAN FRANCISCO
W.P.RR.
TO LOS ANGELES
C.C.T.CO.
WALNUT GROVE
ISLETON
CITRUS
FAIR OAKS
FOLSOM JCT.
FOLSOM
DIAMOND SPRINGS
PLACERVILLE
C.P.&L.T.RY.
D.&C.RY.
WEST APPLEGATE
EAST APPLEGATE
COLFAX
BLUE CANON
EMIGRANT GAP
NORDEN
SUMMIT
EDER
TRUCKEE
N

SACRAMENTO DIVISION